Appendix - A

ENGINEERING AND TRAFFIC DATA OF EXPERIMENTAL PAVEMENT CONSTRUCTION SECTION

SUBGRADE SOIL PROPERTY OF LOW-CLASS PAVEMENT EXPERIMENTAL CONSTRUCTION SECTION

Experiment Section No. Length / Environmental Condition	Boring No.	Sieve Analysis (Passing % by wt.) Sieve Size (mm) 37.5	19.0	12.5	9.5	4.75	2.00	0.425	0.075	Liquid Limit	Plasticity Index	Natural Moisture Content %	*Soaked CBR %	Swell %	Soil Classification	>2.00 mm	2.00 ~ 0.075 mm	<0.075 mm
Section No. 1 L = 800 m. Jct. Alfonso to Magallanes road	No. 1	100	94	91	88	82	74	56	36	NP	NP	36.43	12	0	SM	26	38	36
	No. 2			100	99	98	97	89	77	44	11	36.20	5	0.17	ML	3	20	77
	No. 3	100	98	92	90	84	71	46	26	NP	NP	29.17	19	0	SM	29	45	26
The project road at this point run through flat terrain passing accross the level of grassy, coffee, banana,	No. 4			100	99	99	97	93	86	64	16	65.93	3	0.065	MH	3	11	86
	No. 5	100	91	87	83	75	58	41	30	NP	NP	48.62	9	0	SM	42	28	30
corn, coconut, pineapple plantation and some trees around.	No. 6				100	99	99	97	92	73	25	56.50	7	2.42	MH	1	7	92
	No. 7		100	98	98	97	95	92	81	73	31	47.13	6	2.05	MH	5	14	81
	No. 8		100	98	96	97	96	94	92	76	24	60.56	5	0.15	MH	4	4	92
Section No. 2 L = 800 m. Magallanes to Maragondon	No. 1		93	91	90	86	82	73	64	52	20	24.26	4	0.28	MH	18	18	64
	No. 2		100	98	96	92	81	53	24	NP	NP	29.88	15	0	SM	19	57	24
	No. 3		100	99	99	98	94	86	75	58	26	51.55	2	0	MH	6	19	75
The road generally run on the ridge through grassy,	No. 4		100	99	98	96	90	78	65	47	17	33.22	10	0.39	ML	10	25	65
young corn, mango, banana and bamboo trees. The	No. 5			100	99	98	96	85	71	42	14	28.62	11	0.39	ML	4	25	71
vertical alignment is rolling above the surrounding land	No. 6			100	99	95	89	77	67	42	16	22.98	3	5.45	MH	11	22	67
and the surface is gravel.	No. 7		100	97	96	93	87	74	53	56	20	50.14	10	0.24	MH	13	34	53
	No. 8		100	98	97	96	91	78	66	NP	NP	45.54	2	0	ML	9	25	66

UNIFIED SOIL CLASSIFICATION

LEGEND: SM: Silty sands, silty gravelly sands
SC: Clayey sands, clayey gravely sands
ML: Silts, very fine sands, silty or clayey fine sands
MH: Micaceous silts, diatomaceous silts, volcanic ash
CL: Low plasticity clays, sandy or silty clays
CH: High plasticity clays, sandy clays

NOTE:
* Natural Water Content
67 blows per each 3 layer
4 days soaking

SUBGRADE SOIL PROPERTY OF LOW-CLASS PAVEMENT EXPERIMENTAL CONSTRUCTION SECTION

Experiment Section No. Length / Environmental Condition	Boring No.	Sieve Analysis (Passing % by wt.) Sieve Size (mm) 37.5	19.0	12.5	9.5	4.75	2.00	0.425	0.075	Liquid Limit	Plasticity Index	Natural Moisture Content %	*Soaked CBR %	Swell %	Soil Classification	>2.00 mm	200 ~ 0.075 mm	<0.075 mm
Section No. 3 L = 800 m. Gen. Trias to Amadeo	No. 1	100	95	88	86	80	74	65	53	51	12	45.10	3	0	MH	26	21	53
	No. 2	100	96	93	90	84	71	50	43	NP	NP	24.32	8	0	SM	29	28	43
	No. 3	100	94	91	88	82	72	51	30	NP	NP	29.05	4	0	SM	28	42	30
Through this area of flat terrain the alignment standard are quite good. The profile however is generally low with water standing in the shallow ditch depression. Both sides is residential and vegetated area.	No. 4	100	93	91	87	79	68	54	44	52	21	36.44	4	0	SC	32	24	44
	No. 5		100	98	97	93	84	70	59	44	14	28.57	10	0.54	ML	16	25	59
	No. 6	100	95	93	92	86	71	43	24	NP	NP	26.18	7	0	SM	29	47	24
	No. 7	100	90	82	79	71	60	41	22	NP	NP	17.32	68	0	SM	40	38	22
	No. 8	100	86	80	77	67	57	42	29	NP	NP	31.96	17	0	SM	43	28	29
Section No. 4 L = 800 m. Gen. Trias to Amadeo	No. 1	100	90	87	85	77	64	45	28	NP	NP	19.86	12	0	SM	36	36	28
	No. 2		100	99	98	96	88	67	43	NP	NP	22.34	11	0	SM	12	45	43
	No. 3	100	90	89	88	81	71	57	44	40	15	32.54	8	0.13	SC	29	27	44
	No. 4		100	97	97	94	88	77	60	51	21	39.91	5	0.22	MH	12	28	60
The road crosses through rice field on both sides with generally good vertical and horizontal alignment.	No. 5		100	99	97	93	84	63	36	NP	NP	39.93	3	0	SM	16	48	36
	No. 6	100	80	78	76	73	66	47	26	NP	NP	24.76	14	0	SM	34	40	26
	No. 7		100	99	99	95	89	76	59	42	15	39.49	5	0.13	ML	11	30	59
	No. 8	100	97	96	93	88	78	63	51	41	15	37.98	5	0.13	ML	22	27	51

UNIFIED SOIL CLASSIFICATION

LEGEND: SM: Silty sands, silty gravelly sands
SC: Clayey sands, clayey gravely sands
ML: Silts, very fine sands, silty or clayey fine sands
MH: Micaceous silts, diatomaceous silts, volcanic ash
CL: Low plasticity clays, sandy or silty clays
CH: High plasticity clays, sandy clays

NOTE:
* Natural Water Content
67 blows per each 3 layer
4 days soaking

SUBGRADE SOIL PROPERTY OF LOW-CLASS PAVEMENT EXPERIMENTAL CONSTRUCTION SECTION

Experiment Section No. Length Environmental Condition	Boring No.	Sieve Analysis (Passing % by wt.) Sieve Size (mm) 37.5	19.0	12.5	9.5	4.75	2.00	0.425	0.075	Liquid Limit	Plasti-city Index	Natural Moisture Content %	*Soaked CBR %	Swell %	Soil Classification	>2.00 mm	200 0.075 mm	<0.075 mm
Section No. 5 L = 400 m. Trece Martirez to G. M. Alvarez	No. 1	100	98	98	96	90	81	71	59	54	16	39.49	4	0	MH	19	22	59
	No. 2	100	91	81	78	68	57	42	28	38	13	19.88	19	0	SC	43	29	28
	No. 3	100	92	89	86	76	66	49	33	29	8	19.90	7	0	SC	34	33	33
The road run up accross the ridge through level of grassy pasture land.	No. 4		100	99	98	93	88	79	71	50	17	34.51	8	0.26	MH	12	17	71

UNIFIED SOIL CLASSIFICATION

LEGEND: SM: Silty sands, silty gravelly sands
SC: Clayey sands, clayey gravely sands
ML: Silts, very fine sands, silty or clayey fine sands
MH: Micaceous silts, diatomaceous silts, volcanic ash
CL: Low plasticity clays, sandy or silty clays
CH: High plasticity clays, sandy clays

NOTE:

* Natural Water Content
67 blows per each 3 layer
4 days soaking

TRAFFIC COUNT SURVEY RESULT
(12-Hour Traffic Volume : Average of 3-day Counts)
November 1989

SURVEY STATION	DIRECTION	Car/ Jeep	Jeepney	Pick-up/ Van	BUS		TRUCK			SUB-TOTAL	Motor-Trycycle	Motor-Cycle	Special	TOTAL
					Mini	Large	2-axle	3-axle	Trailer					
1	To Jct. Alfonso	7	22	23	0	0	3	0	0	55	3	2	0	60
	To Magallanes	10	22	19	0	0	3	1	0	55	0	3	0	58
2	To Magallanes	9	23	3	0	0	3	0	0	38	4	5	0	47
	To Maragondon	9	21	6	0	0	3	0	0	39	3	5	0	47
3	To Gen. Trias	75	128	102	1	0	22	1	0	329	11	24	2	366
	To Jct. Mangahan	78	118	115	1	1	14	1	0	328	8	23	1	360
4	To Carmona	341	233	285	56	4	71	30	1	1,021	12	36	2	1,071
	To Jct. Mangahan	362	245	258	50	4	89	32	1	1,041	17	30	1	1,089

Survey Station No.	Location	Esperimental Pavement Section No.
1	Jct. Alfonso - Magallanes	Section 1
2	Magallanes - Maragondon	Section 2
3	Gen. Trias - Jct. Mangahan	Section 3 & 4
4	Jct. Mangahan - Carmona	Section 5

AVERAGE ANNUAL DAILY TRAFFIC (AADT) OF EXPERIMENTAL PAVEMENT CONSTRUCTION SECTIONS

SURVEY STATION	DIRECTION	Car/ Jeep	Jeepney	Pick-up/ Van	BUS		TRUCK			TOTAL
					Mini	Large	2-axle	3-axle	Trailer	
1	To Jct. Alfonso	11	35	35	0	0	6	0	0	87
	To Magallanes	15	35	29	0	0	6	2	0	87
	T o t a l	26	70	64	0	0	12	2	0	174
2	To Magallanes	14	36	5	0	0	6	0	0	61
	To Maragondon	14	33	9	0	0	6	0	0	62
	T o t a l	28	69	14	0	0	12	0	0	123
3	To Gen. Trias	84	165	114	1	0	27	2	0	393
	To Jct. Mangahan	87	154	128	1	2	17	2	0	391
	T o t a l	171	319	242	2	2	44	4	0	784
4	To Carmona	380	303	318	56	6	86	37	2	1,188
	To Jct. Mangahan	404	319	288	50	6	108	39	2	1,216
	T o t a l	784	622	606	106	12	194	76	4	2,404

HOURLY AND SEASONAL FACTORS

DPWH STATION	Experimental Pavement Section	Factor	Car/Jeep/ Pick-up/Van	Jeepney	BUS		TRUCKS	
					Mini	Large	2-axle	Trailer
STA. NO. 138 Provincial Boundary Tagaytay/Lian	Sections 1 and 2	Hourly Factor	1.2214	1.3216	1.0000	1.0984	1.6939	1.4059
		Seasonal Factor	1.2317	1.1835	1.7917	1.4055	1.1216	1.0192
STA. NO. 136 Provincial Boundary Binan/Carmona	Sections 3, 4 and 5	Hourly Factor	1.3233	1.3894	1.0417	1.3736	1.3531	1.6120
		Seasonal Factor	0.8426	0.9354	0.9524	1.0633	0.8947	1.1939

NOTE: Seasonal Factor is for November.
Source: Planning Service, DPWH

AXLE LOAD DISTRIBUTION (Station-1 , Truck)
(Jct. Alfonso - Magallanes)

Number of Vehicles Weighed = 10 November 1989

Axle Load		Single Axle		Tandem Axle	
(kips)	(kg)	No.of Axles	18-kip ESALs	No.of Axles	18-kip ESALs
2	.454- 1.361	3	.00	-	-
4	1.361- 2.268	5	.02	-	-
6	2.268- 3.175	1	.01	-	-
8	3.175- 4.082	5	.17	-	-
10	4.082- 4.990	4	.34	-	-
12	4.990- 5.897	-	-	-	-
14	5.897- 6.804	-	-	-	-
16	6.804- 7.711	-	-	1	.05
18	7.711- 8.618	-	-	-	-
20	8.618- 9.525	-	-	-	-
22	9.525-10.433	1	2.44	-	-
24	10.433-11.340	-	-	-	-
26	11.340-12.247	-	-	-	-
28	12.247-13.154	-	-	-	-
30	13.154-14.061	-	-	-	-
32	14.061-14.969	-	-	-	-
34	14.969-15.876	-	-	-	-
36	15.876-16.783	-	-	-	-
38	16.783-17.690	-	-	-	-
40	17.690-18.597	-	-	-	-
42	18.597-19.504	-	-	-	-
44	19.504-20.412	-	-	-	-
46	20.412-21.319	-	-	-	-
48	21.319-22.226	-	-	-	-
50	22.226-23.133	-	-	-	-
52	23.133-24.040	-	-	-	-
54	24.040-24.948	-	-	-	-
56	24.948-25.855	-	-	-	-
58	25.855-26.762	-	-	-	-
60	26.762-27.669	-	-	-	-
62	27.669-28.576	-	-	-	-
64	28.576-29.483	-	-	-	-
66	29.483-30.391	-	-	-	-
68	30.391-31.298	-	-	-	-
70	31.298-32.205	-	-	-	-
72	32.205-33.112	-	-	-	-
74	33.112-34.019	-	-	-	-
76	34.019-34.927	-	-	-	-
78	34.927-35.834	-	-	-	-
80	35.834-36.741	-	-	-	-
82	36.741-37.648	-	-	-	-
84	37.648-38.555	-	-	-	-
86	38.555-39.463	-	-	-	-
88	39.463-40.370	-	-	-	-
90	40.370-41.277	-	-	-	-
	Total	19	2.98	1	.05

Load Factor= .303

Note : Equivalency factor for flexible pavement,pt=2,SN=2

AXLE LOAD DISTRIBUTION (Station-3 , Bus)
(Gen. Trias - Jct. Mangahan)

Number of Vehicles Weighed = 4 November 1989

Axle Load		Single Axle		Tandem Axle	
(kips)	(kg)	No.of Axles	18-kip ESALs	No.of Axles	18-kip ESALs
2	.454- 1.361	-	-	-	-
4	1.361- 2.268	4	.01	-	-
6	2.268- 3.175	-	-	-	-
8	3.175- 4.082	4	.14	-	-
10	4.082- 4.990	-	-	-	-
12	4.990- 5.897	-	-	-	-
14	5.897- 6.804	-	-	-	-
16	6.804- 7.711	-	-	-	-
18	7.711- 8.618	-	-	-	-
20	8.618- 9.525	-	-	-	-
22	9.525-10.433	-	-	-	-
24	10.433-11.340	-	-	-	-
26	11.340-12.247	-	-	-	-
28	12.247-13.154	-	-	-	-
30	13.154-14.061	-	-	-	-
32	14.061-14.969	-	-	-	-
34	14.969-15.876	-	-	-	-
36	15.876-16.783	-	-	-	-
38	16.783-17.690	-	-	-	-
40	17.690-18.597	-	-	-	-
42	18.597-19.504	-	-	-	-
44	19.504-20.412	-	-	-	-
46	20.412-21.319	-	-	-	-
48	21.319-22.226	-	-	-	-
50	22.226-23.133	-	-	-	-
52	23.133-24.040	-	-	-	-
54	24.040-24.948	-	-	-	-
56	24.948-25.855	-	-	-	-
58	25.855-26.762	-	-	-	-
60	26.762-27.669	-	-	-	-
62	27.669-28.576	-	-	-	-
64	28.576-29.483	-	-	-	-
66	29.483-30.391	-	-	-	-
68	30.391-31.298	-	-	-	-
70	31.298-32.205	-	-	-	-
72	32.205-33.112	-	-	-	-
74	33.112-34.019	-	-	-	-
76	34.019-34.927	-	-	-	-
78	34.927-35.834	-	-	-	-
80	35.834-36.741	-	-	-	-
82	36.741-37.648	-	-	-	-
84	37.648-38.555	-	-	-	-
86	38.555-39.463	-	-	-	-
88	39.463-40.370	-	-	-	-
90	40.370-41.277	-	-	-	-
	Total	8	.15	-	-

Load Factor= .038

Note : Equivalency factor for flexible pavement,pt=2,SN=2

AXLE LOAD DISTRIBUTION (Station-3 , Truck)
(Gen. Trias - Jct. Mangahan)

Number of Vehicles Weighed = 161 November 1989

Axle Load		Single Axle		Tandem Axle	
(kips)	(kg)	No.of Axles	18-kip ESALs	No.of Axles	18-kip ESALs
2	.454- 1.361	13	.00	-	-
4	1.361- 2.268	69	.21	-	-
6	2.268- 3.175	67	.80	-	-
8	3.175- 4.082	37	1.29	-	-
10	4.082- 4.990	39	3.32	-	-
12	4.990- 5.897	23	4.07	-	-
14	5.897- 6.804	10	3.38	3	.09
16	6.804- 7.711	11	6.58	3	.14
18	7.711- 8.618	3	3.00	6	.46
20	8.618- 9.525	2	3.18	-	-
22	9.525-10.433	6	14.64	1	.17
24	10.433-11.340	10	36.20	-	-
26	11.340-12.247	4	20.84	-	-
28	12.247-13.154	1	7.31	1	.47
30	13.154-14.061	1	10.00	-	-
32	14.061-14.969	1	13.50	-	-
34	14.969-15.876	-	-	-	-
36	15.876-16.783	-	-	-	-
38	16.783-17.690	-	-	4	7.00
40	17.690-18.597	-	-	3	6.57
42	18.597-19.504	-	-	2	5.46
44	19.504-20.412	-	-	-	-
46	20.412-21.319	-	-	-	-
48	21.319-22.226	-	-	1	4.98
50	22.226-23.133	-	-	1	5.99
52	23.133-24.040	-	-	-	-
54	24.040-24.948	-	-	-	-
56	24.948-25.855	-	-	-	-
58	25.855-26.762	-	-	-	-
60	26.762-27.669	-	-	-	-
62	27.669-28.576	-	-	-	-
64	28.576-29.483	-	-	-	-
66	29.483-30.391	-	-	-	-
68	30.391-31.298	-	-	-	-
70	31.298-32.205	-	-	-	-
72	32.205-33.112	-	-	-	-
74	33.112-34.019	-	-	-	-
76	34.019-34.927	-	-	-	-
78	34.927-35.834	-	-	-	-
80	35.834-36.741	-	-	-	-
82	36.741-37.648	-	-	-	-
84	37.648-38.555	-	-	-	-
86	38.555-39.463	-	-	-	-
88	39.463-40.370	-	-	-	-
90	40.370-41.277	-	-	-	-
	Total	297	128.32	25	31.33

Load Factor= .992

Note : Equivalency factor for flexible pavement,pt=2,SN=2

AXLE LOAD DISTRIBUTION (Station-4 , Bus)
(Carmona - Jct. Mangahan)

Number of Vehicles Weighed = 49 November 1989

Axle Load (kips)	Axle Load (kg)	Single Axle No.of Axles	Single Axle 18-kip ESALs	Tandem Axle No.of Axles	Tandem Axle 18-kip ESALs
2	.454- 1.361	-	-	-	-
4	1.361- 2.268	5	.02	-	-
6	2.268- 3.175	36	.43	-	-
8	3.175- 4.082	18	.63	-	-
10	4.082- 4.990	22	1.87	-	-
12	4.990- 5.897	9	1.59	-	-
14	5.897- 6.804	-	-	-	-
16	6.804- 7.711	-	-	-	-
18	7.711- 8.618	2	2.00	-	-
20	8.618- 9.525	4	6.36	-	-
22	9.525-10.433	-	-	-	-
24	10.433-11.340	1	3.62	-	-
26	11.340-12.247	-	-	-	-
28	12.247-13.154	-	-	-	-
30	13.154-14.061	-	-	-	-
32	14.061-14.969	1	13.50	-	-
34	14.969-15.876	-	-	-	-
36	15.876-16.783	-	-	-	-
38	16.783-17.690	-	-	-	-
40	17.690-18.597	-	-	-	-
42	18.597-19.504	-	-	-	-
44	19.504-20.412	-	-	-	-
46	20.412-21.319	-	-	-	-
48	21.319-22.226	-	-	-	-
50	22.226-23.133	-	-	-	-
52	23.133-24.040	-	-	-	-
54	24.040-24.948	-	-	-	-
56	24.948-25.855	-	-	-	-
58	25.855-26.762	-	-	-	-
60	26.762-27.669	-	-	-	-
62	27.669-28.576	-	-	-	-
64	28.576-29.483	-	-	-	-
66	29.483-30.391	-	-	-	-
68	30.391-31.298	-	-	-	-
70	31.298-32.205	-	-	-	-
72	32.205-33.112	-	-	-	-
74	33.112-34.019	-	-	-	-
76	34.019-34.927	-	-	-	-
78	34.927-35.834	-	-	-	-
80	35.834-36.741	-	-	-	-
82	36.741-37.648	-	-	-	-
84	37.648-38.555	-	-	-	-
86	38.555-39.463	-	-	-	-
88	39.463-40.370	-	-	-	-
90	40.370-41.277	-	-	-	-
	Total	98	30.02	-	-

Load Factor= .613

Note : Equivalency factor for flexible pavement,pt=2,SN=2

AXLE LOAD DISTRIBUTION (Station-4 , Truck)
(Carmona - Jct. Mangahan)

Number of Vehicles Weighed = 273 November 1989

Axle Load		Single Axle		Tandem Axle	
(kips)	(kg)	No.of Axles	18-kip ESALs	No.of Axles	18-kip ESALs
2	.454- 1.361	22	.00	-	-
4	1.361- 2.268	88	.26	-	-
6	2.268- 3.175	96	1.15	-	-
8	3.175- 4.082	88	3.08	-	-
10	4.082- 4.990	77	6.55	-	-
12	4.990- 5.897	36	6.37	10	.16
14	5.897- 6.804	17	5.75	14	.41
16	6.804- 7.711	10	5.98	8	.38
18	7.711- 8.618	10	10.00	2	.15
20	8.618- 9.525	5	7.95	3	.35
22	9.525-10.433	8	19.52	2	.34
24	10.433-11.340	17	61.54	1	.24
26	11.340-12.247	4	20.84	-	-
28	12.247-13.154	1	7.31	-	-
30	13.154-14.061	1	10.00	-	-
32	14.061-14.969	1	13.50	-	-
34	14.969-15.876	1	17.90	-	-
36	15.876-16.783	-	-	6	8.28
38	16.783-17.690	-	-	3	5.25
40	17.690-18.597	-	-	3	6.57
42	18.597-19.504	-	-	-	-
44	19.504-20.412	-	-	2	6.72
46	20.412-21.319	-	-	2	8.22
48	21.319-22.226	-	-	3	14.94
50	22.226-23.133	-	-	1	5.99
52	23.133-24.040	-	-	-	-
54	24.040-24.948	-	-	2	17.02
56	24.948-25.855	-	-	-	-
58	25.855-26.762	-	-	-	-
60	26.762-27.669	-	-	2	27.60
62	27.669-28.576	-	-	-	-
64	28.576-29.483	-	-	-	-
66	29.483-30.391	-	-	-	-
68	30.391-31.298	-	-	-	-
70	31.298-32.205	-	-	-	-
72	32.205-33.112	-	-	-	-
74	33.112-34.019	-	-	1	36.40
76	34.019-34.927	-	-	-	-
78	34.927-35.834	-	-	-	-
80	35.834-36.741	-	-	-	-
82	36.741-37.648	-	-	-	-
84	37.648-38.555	-	-	-	-
86	38.555-39.463	-	-	-	-
88	39.463-40.370	-	-	-	-
90	40.370-41.277	-	-	-	-
	Total	482	197.70	65	139.03

Load Factor=1.233

Note : Equivalency factor for flexible pavement,pt=2,SN=2

Appendix - B

FIELD AND LABORATORY TEST RESULTS

MATERIAL TEST RESULTS OF EXPERIMENTAL PAVEMENT CONSTRUCTION

Table No. 1 to Table No. 13
Test Results of Materials used in Section No. 1, 2, 3, and 4

TABLE 1 AGGREGATE FOR SUBBASE COURSE USED IN SECTION NO. 1 AND NO. 2

Materials : River-run Sandy Gravel
Source : Mobato Quarry, Cavite

Test Items		Test Results	Specification Item 200
Sieve Analysis (% Passing)			
Sieve Size			
50.0 mm	%	100	100
25.0 mm	%	69	55 - 85
9.5 mm	%	70	40 - 75
0.075 mm	%	2	0 - 12
Liquid Limit		NP	<35
Plasticity Index		NP	<12
Abrasion Loss	%	43	<50
Moisture Density Relation (AASHTO T-180 C)			
Maximum Dry Density	Kg/m^3	1,940	
Optimum Moisture Content	%	16.6	
California Bearing Ratio (At MDD)	%	50	>25
Swell	%	0	

Remarks: Sample meets Specification Requirements.

TABLE 2 AGGREGATE FOR SUBBASE COURSE USED IN SECTION NO. 3 AND NO. 4

Materials : River-run Sandy Gravel
Source : Mamba Quarry, Cavite Mamba River

Test Items		Test Results	Specification Item 200
Sieve Analysis (% Passing)			
Sieve Size			
50.0 mm	%	100	100
25.0 mm	%	69	55 - 85
9.5 mm	%	58	40 - 75
0.075 mm	%	9	0 - 12
Liquid Limit		29	<35
Plasticity Index		5	<12
Abrasion Loss	%	41	<50
Moisture Density Relation (AASHTO T-180 C)			
Maximum Dry Density	Kg/m^3	1,963	
Optimum Moisture Content	%	10.2	
California Bearing Ratio (At MDD)	%	53	>25
Swell	%	0.87	

Remarks: Sample meets Specification Requirements.

TABLE 3 AGGREGATE FOR BASE COURSE USED IN SECTION NO. 1

Materials : Crushed Stone
Source : Unirock Quarry, Antipolo, Rizal

Test Items		Test Results	Specification Item 202
Sieve Analysis (% Passing)			
Sieve Size			
37.5 mm	%	100	100
25.0 mm	%	-	-
19.0 mm	%	79	60 - 85
9.5 mm	%	-	-
4.75 mm	%	55	30 - 55
0.425 mm	%	13	8 - 25
0.075 mm	%	5	2 - 14
Liquid Limit		NP	<25
Plasticity Index		NP	< 6
Abrasion Loss	%	-	<45
Moisture Density Relation (AASHTO T-180 C)			
Maximum Dry Density	Kg/m^3	1,940	
Optimum Moisture Content	%	12.0	
California Bearing Ratio (At MDD)	%	-	>80
Swell	%	-	

Remarks: Abrasion Loss and CBR were not tested.

TABLE 4 AGGREGATE FOR BASE COURSE USED IN SECTION NO. 2, NO. 3 AND NO. 4

Materials : Crushed Stone
Source : Unirock Quarry, Antipolo, Rizal

Test Items		Test Results	Specification Item 202
Sieve Analysis (% Passing)			
Sieve Size			
37.5 mm	%	100	100
25.0 mm	%	81	-
19.0 mm	%	71	60 - 85
9.5 mm	%	15	-
4.75 mm	%	38	30 - 55
0.425 mm	%	15	8 - 25
0.075 mm	%	10	2 - 14
Liquid Limit		23	<25
Plasticity Index		4	< 6
Abrasion Loss	%	35	<45
Moisture Density Relation (AASHTO T-180 C)			
Maximum Dry Density	Kg/m^3	2,277	
Optimum Moisture Content	%	5.8	
California Bearing Ratio (At MDD)	%	117	>80
Swell	%	0.09	

Remarks: Sample meets Specification Requirements.

TABLE 5 AGGREGATE FOR AGGREGATE SURFACE COURSE USED IN SECTION NO. 1

Materials : Blended Crushed Stone
Source : Urto Interprizes, Batangus

Test Items		Test Results	Specification Item 300
Sieve Analysis (% Passing)			Grading A
Sieve Size			
50.0 mm	%	100	100
9.5 mm	%	68	55 - 85
4.75 mm	%	52	25 - 65
2.00 mm	%	38	25 - 50
0.425 mm	%	18	15 - 30
0.075 mm	%	10	5 - 20
Liquid Limit		14	<35
Plasticity Index		7	4 - 9
Abrasion Loss	%	-	<45
Moisture Density Relation (AASHTO T-180°C)			
Maximum Dry Density	kg/cm^3	1,920	
Optimum Moisture Content	%	14.3	

Remarks: Sample meets Specification Requirements.
Abrasion Loss was not tested.

TABLE 6 AGGREGATE FOR AGGREGATE SURFACE COURSE USED IN SECTION NO. 1

Materials : Blended Crushed Stone
Source : Unirock quarry, Antipolo, Rizal

Test Items		Test Results	Specification Item 300
Sieve Analysis (% Passing)			Grading A
Sieve Size			
50.0 mm	%	100	100
9.5 mm	%	57	55 - 85
4.75 mm	%	45	25 - 65
2.00 mm	%	31	25 - 50
0.425 mm	%	16	15 - 30
0.075 mm	%	9	5 - 20
Liquid Limit		29	<35
Plasticity Index		8	4 - 9
Abrasion Loss	%	35	<45
Moisture Density Relation (AASHTO T-180°C)			
Maximum Dry Density	kg/cm^3	2,360	
Optimum Moisture Content	%	7.4	

Remarks: Sample meets Specification Requirements.

TABLE 7 AGGREGATE FOR BMP

Materials : Crushed Stone 1-1/2"
Source : Angono, Rizal

Test Items		Test Results	Specification Item 305
Sieve Analysis (% Passing)			
Sieve Size			
63.0 mm	%	100	100
50.0 mm	%	100	100
37.5 mm	%	73	35 - 75
25.0 mm	%	12	0 - 15
19.0 mm	%	8	-
12.5 mm	%	3	0 - 5
9.5 mm	%	-	-
4.75 mm	%	-	-
Bulk Specific Gravity (SSD)	%	2.80	
Absorption	%	0.80	
Abrasion Loss	%	13	<40

Remarks: Sample meets Specification Requirements.

TABLE 8 AGGREGATE FOR BST AND BMP

Materials : Crushed Stone 3/4"
Source : Angono, Rizal

Test Items		Test Results	Specification BST Item 304	Specification BMP 305
Sieve Analysis (% Passing)			Grading A	C
Sieve Size				
25.0 mm	%	100	100	
19.0 mm	%	97	90 - 100	
12.5 mm	%	54	20 - 55	
9.5 mm	%	12	0 - 15	
4.75 mm	%	4	0 - 5	
2.36 mm	%	-		
Bulk Specific Gravity (SSD)		2.80		
Absorption	%	0.8		
Abrasion Loss	%	20		<40

Remarks: Sample meets Specification Requirements.

TABLE 9 AGGREGATE FOR BST AND DBST

Materials : Crushed Stone 3/8"
Source : Angono, Rizal

Test Items			Test Results	Specification BST Item 304	BMP 305
Sieve Analysis (% Passing)				Grading B	D
Sieve Size					
12.5	mm	%	100	100	
9.5	mm	%	99	85 - 100	
4.75	mm	%	19	10 - 30	
2.36	mm	%	3	0 - 10	
1.18	mm	%	2	0 - 5	
0.30	mm	%	-		
Bulk Specific Gravity (SSD)			2.75		
Absorption		%	1.40		
Abrasion Loss		%	22	<40	

Remarks: Sample meets Specification Requirements.

TABLE 10 AGGREGATE FOR BITUMINOUS SEAL COAT

Materials : Crushed Sand
Source : Angono, Rizal

Test Items			Test Results	Specification Item 303
Sieve Analysis (% Passing)				Type 2
Sieve Size				
9.5	mm	%	100	100
4.75	mm	%	97	85 - 100
2.36	mm	%	70	60 - 100
1.18	mm	%	43	-
0.300	mm	%	8	-
0.150	mm	%	3	0 - 10
Bulk Specific Gravity (SSD)			2.75	
Absorption		%	1.48	

Remarks: Sample meets Specification Requirements.

TABLE 11 EMULSIFIED ASPHALT

Materials : Cationic Emulsified Asphalt CSS-1h
Source : Rigid Sales Corporation
Proposed Use : Prime Coat, Seal Coat, BST and BMP

Test Items		Test Results	Specification AASHTO M-208
Viscosity			
(Saybolt furol) 25°C	s	27	20 - 100
Stability	%	0.1	1.0 max
Cement mixing	%	2.0	2.0 max
Sieve test	%	0.1	0.1 max
Residue by distillation	%		57 min
Residue			
Penetration, 25°C, 100g, 5 sec		60	40 - 90
Ductility 25°C	cm	100	40 min
Solubility in tricloethlene	%	98.7	97.5 min
Specific Gravity 25°C/25°C		1.01	

Remarks: Sample meets Specification Requirements.

TABLE 12 ASPHALT CEMENT

Materials : Straight Asphalt 60 - 70
Source : Petrophil Corporation
Proposed Use : Asphalt Concrete Mixture

Test Items		Test Results	Specification AASHTO M226
Penetration at 25°C, 100 g			
5 sec		65	60 - 70
Flush Point COP	°C	333	232 min
Ductility 25°C	cm	118	100 min
Loss of heating	%	0.3	0.5 max
Solubility in trichloethylene	%	99.5	99.0 min
Residue			
Penetration % of original	%	61	54 min
Ductility 25 cm/min	cm	100	50 min
Spot Test		Negative	Negative
Specific Gravity 25°C/25°C		1.01	

Remarks: Sample meets Specification Requirements.

TABLE 13 ASPHALT CONCRETE MIXTURE DESIGN

Aggregate Blending Proportion

Materials	Material Source	Production by Wt. Percent	Specific Gravity
3/4" Crushed Stone	Golden Hills Taytay, Rizal	10%	2.80
3/8" Crushed Stone	"	35%	2.83
Crushed Sand	"	40%	2.58
Natural Sand	Bulcan	15%	2.31
		100%	2.657

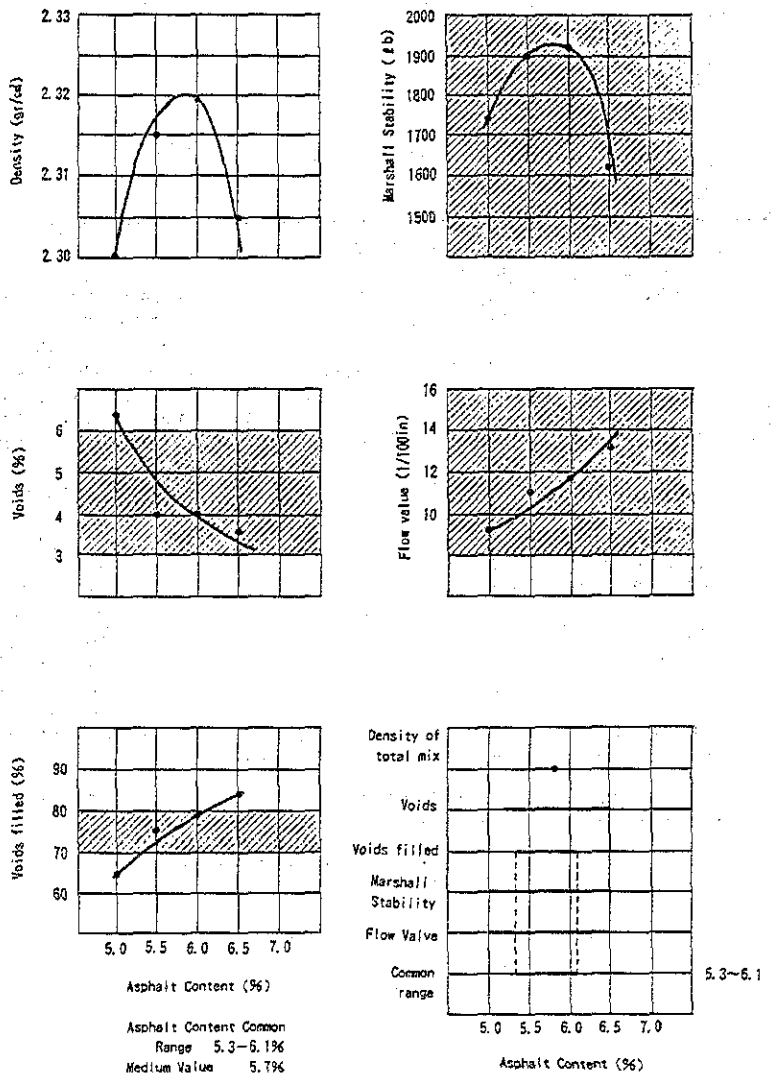
Blended Aggregate Gradation (Passing Sieve by Wt. Percent)

Sieve Size		Grading %	Specification Item 310, Type F
19	mm	100	100
12.5	mm	94	-
9.5	mm	91	-
4.75	mm	63	45 - 65
2.36	mm	48	33 - 53
1.18	mm	33	-
0.300	mm	11	10 - 20
0.075	mm	5	3 - 8

Marshall Test Properties of Mixture at Optimum Asphalt Content of 5.7% by Wt. of Total Mix

Test Items		Test Results	Specification Min	Max
Density	gr/cm^3	2.32		
Stability	lb	1,920	1,200	-
Flow	0.01 in	11.8	8	16
Void	%	4.2	3	6
Void Filled	%	73	70	80

Remarks: Test Results meet Specification Requirements.



Ashalt Content : Medium Percentage by Wt. of Total Aggregates

Graphics for Determination of Design Asphalt Content

Table No. 14 to Table No. 27
Test Results of Materials used in Section No. 5

TABLE 14 AGGREGATE FOR SUBBASE COURSE

Materials : Blended Aggregates of Crushed Stone/Sand/Soil
Source : Angono, Quarry and Trece Martrez Quarry

Test Items		Test Results	Specification Item 200
Sieve Analysis (% Passing)			
Sieve Size			
50.0 mm	%	100	100
25.0 mm	%	85	55 - 85
9.5 mm	%	46	40 - 75
0.075 mm	%	9	0 - 12
Liquid Limit		32	<35
Plasticity Index		12	<12
Abrasion Loss	%	42	50
Moisture Density Relation (AASHTO T-180 C)			
Maximum Dry Density	Kg/m^3	1,980	
Optimum Moisture Content	%	8.9	
California Bearing Ratio (At MDD)	%	27	>25

Remarks: Sample meets Specification Requirements.

TABLE 15 AGGREGATE FOR SUBBASE COURSE

Materials : Blended Crushed Aggregate
Source : Unirock Quarry, Antipolo, Rizal

Test Items		Test Results	Specification Item 200
Sieve Analysis (% Passing)			Grading A
Sieve Size			
37.5 mm	%	100	100
25.0 mm	%	86	-
19.0 mm	%	81	60 - 85
9.5 mm	%	59	-
4.75 mm	%	47	30 - 55
0.425 mm	%	18	8 - 25
0.075 mm	%	11	2 - 14
Liquid Limit		25	<25
Plasticity Index		6	< 6
Abrasion Loss	%	28	<45
Moisture Density Relation (AASHTO T-180 C)			
Maximum Dry Density	Kg/m^3	2,110	
Optimum Moisture Content	%	8.4	
California Bearing Ratio (At MDD)	%	46	>80
Swell	%	-	

TABLE 16 EMULSIFIED ASPHALT

Materials : Emulsified Asphalt SS-1
Source : Petrophil Corporation
Proposed Use : Prime Coat

Test Items		Test Results	Specification AASHTO M-140
Viscosity			
(Saybolt furol) 25°C	s	25	20 - 100
Stability	%	0.6	1.0 max
Cement mixing	%	1.7	2.0 max
Sieve test	%	0.05	0.1 max
Residue by distillation	%	60.5	57 min
Residue			
Penetration, 25°C, 100g, 5 sec		110	100 - 200
Ductility 25°C	cm	115	40 min
Solubility in tricloethlene	%	99.2	97.5 min
Specific Gravity 25°C/25°C		1.02	

Remarks: Sample meets Specification Requirements.

TABLE 17 ASPHALT CEMENT

Materials : Straight Asphalt 60 - 70
Source : Petrophil Corporation
Proposed Use : Asphalt Concrete Mixture

Test Items		Test Results	Specification AASHTO M226
Penetration at 25°C, 100 g			
5 sec		64	60 - 70
Flush Point COP	°C	338	232 min
Ductility 25°C	cm	>120	100 min
Loss of heating	%	0.02	0.5 max
Solubility in trichloethylene	%	99.9	99.0 min
Residue			
Penetration % of original	%	66	54 min
Ductility 25 cm/min	cm	>100	50 min
Spot Test		Negative	Negative
Specific Gravity 25°C/25°C			

Remarks: Sample meets Specification Requirements.

TABLE 18 COARSE AGGREGATE FOR ASPHALT CONCRETE

Materials : 3/4" Crushed Aggregate
Source : Monterock, San Mateo, Rizal

Test Items		Test Results	
Sieve Analysis (% Passing)			
Sieve Size			
19.0	mm	%	100
12.5	mm	%	64
9.5	mm	%	35
4.75	mm	%	2
0.075	mm	%	0
Bulk Specific Gravity (SSD)			2.81
Absorption		%	1.13
Abrasion Loss		%	25
Dry Unit Weight			
Loose		kg/m^3	1.32
Roded		kg/m^3	1.44

TABLE 19 COARSE AGGREGATE FOR ASPHALT CONCRETE

Materials : 3/8" Crushed Aggregate
Source : Monterock, San Mateo, Rizal

Test Items		Test Results	
Sieve Analysis (% Passing)			
Sieve Size			
12.5	mm	%	100
9.5	mm	%	93
4.75	mm	%	18
2.36	mm	%	3
0.075	mm	%	0
Bulk Specific Gravity (SSD)			2.81
Absorption		%	1.13
Abrasion Loss		%	25.8
Dry Unit Weight			
Loose		kg/m^3	1.32
Roded		kg/m^3	1.46

TABLE 20 FINE AGGREGATE FOR ASPHALT CONCRETE

Materials : Manufactured Sand
Source : Monterock, San Mateo, Rizal

Test Items		Test Results
Sieve Analysis (% Passing)		
Sieve Size		
9.5 mm	%	100
4.75 mm	%	99
1.18 mm	%	55
0.300 mm	%	13
0.075 mm	%	2
Bulk Specific Gravity (SSD)		2.86
Absorption	%	3.63
Dry Unit Weight		
Loose	kg/m^3	1.53
Roded	kg/m^3	1.63

TABLE 21 MINERAL FILLER FOR ASPHALT CONCRETE

Materials : Hydrated Lime
Source : Guanzon Lime, Lucena City, Quezon

Test Items		Test Results	Specification Item 703 A
Sieve Analysis (% Passing)			
Sieve Size			
0.600 mm	%	100	100
0.300 mm	%	98	95 - 85
0.075 mm	%	85	70 - 100
Calcium Oxide & Magnesium Oxide (Non-Volatile Basis)	%	66	60 min

Remarks: Sample meets Grading Requirements of Specification.

TABLE 22 ASPHALT CONCRETE MIXTURE DESIGN

Aggregate Blending Proportion

Materials	Material Source	Blending Proportion by Wt. Percent
3/4" Crushed Stone	Monterock, San Mateo, Rizal	14 %
1/2" Crushed Stone	"	20 %
3/8" Crushed Stone	"	21 %
Manufactured Sand	"	44 %
Hydrated Lime	Guanzon Lime, Lucena, Quezon	1 %
Total		100 %

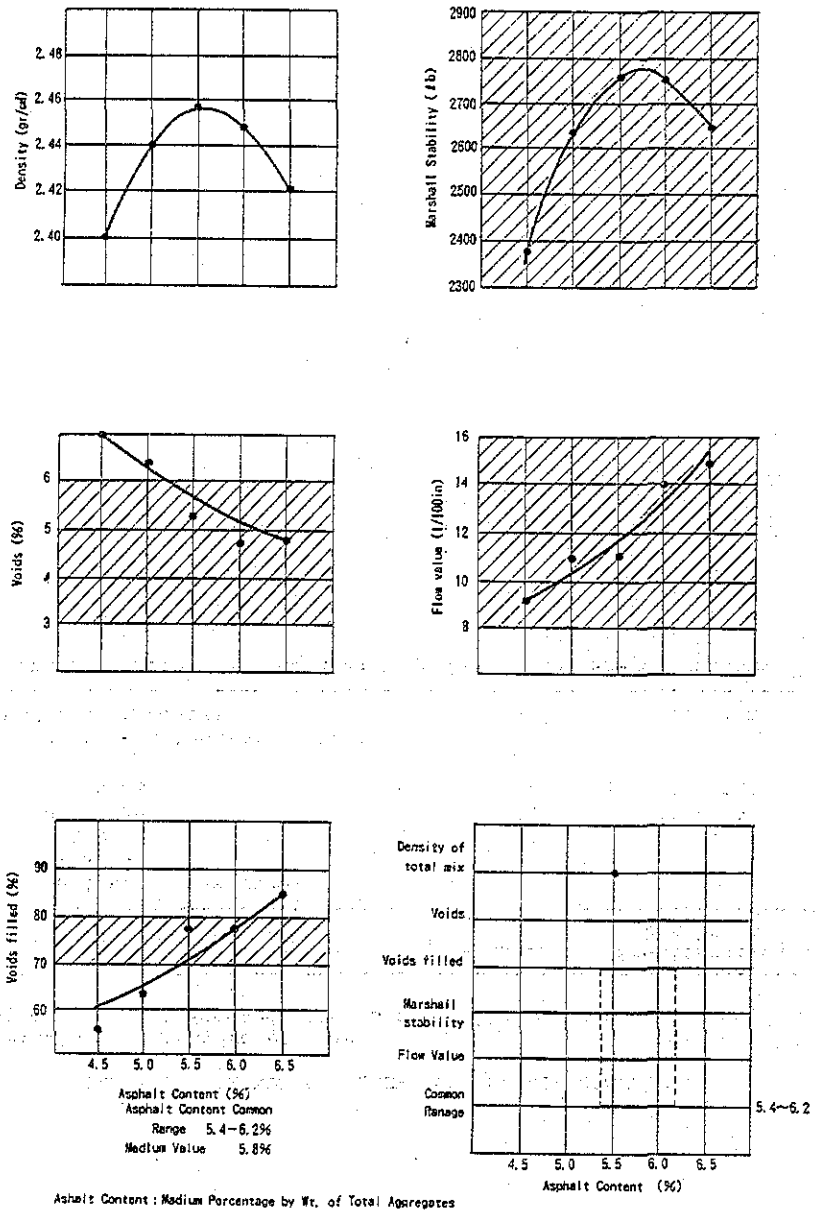
Blended Aggregate Gradation (Passing Sieve by Wt. Percent)

Sieve Size	Grading %	Specification Item 310, Type F
19 mm	100	100
12.5 mm	96	-
9.5 mm	84	-
4.75 mm	55	45 - 65
2.36 mm	43	33 - 53
1.18 mm	35	-
0.300 mm	15	10 - 20
0.075 mm	5	3 - 8

Marshall Test Properties of Mixture at Optimum Asphalt Content of 5.8% by Wt. of Total Aggregates

Test Items		Test Results	Specification Min	Specification Max
Density	gr/cm^3	2.45		
Stability	lb	2,756	1,200	-
Flow	0.01 in	13	8	16
Void	%	5.3	3	6
Void Filled	%	71	70	80

Remarks: Test Results meet Specification Requirements.



Ashalt Content : Medium Porcentage by Wt. of Total Aggregates

Graphics for Determination of Design Content

TABLE 23 JOB-MIX FORMULA

Mix Proportion

Materials	By Wt. of Aggregate		by Wt. of Total Mix	
3/4" Crushed Stone	14	%	13.23	%
1/2" Crushed Stone	20	%	18.90	%
3/8" Crushed Stone	21	%	19.85	%
Manufactured Sand	44	%	41.59	%
Hydrated Lime	1	%	0.95	%
Asphalt Cement 60/70	5.80	%	5.48	%
Total			100	%

Job-mix Formula

1. Aggregate Grading:

Sieve Size	Design Grading % Passing	Tolerance %	Job-mix Tolerance %	Spec. %
19 mm	100	0	100	100
12.5 mm	96	-	-	-
9.5 mm	84	-	-	-
4.75 mm	55	±4	48 - 62	45 - 65
2.36 mm	43	±4	39 - 47	33 - 53
1.18 mm	35	-	-	-
0.300 mm	15	±4	11 - 19	10 - 20
0.075 mm	5	±2	3 - 7	3 - 8

2. Asphalt Content:

Asphalt Content	Design Asphalt Content %	Tolerance %	Job-mix Tolerance %
% by Wt. of Aggregate	5.8	±0.4	5.4 - 6.2
% by Wt. of Total Mix	5.5	±0.4	5.1 - 5.9

3. Mixing Temperature:

Temperature at Mix Design Test	Tolerance	Job-mix Tolerance
139°C	±10°C	129 - 149°C

TABLE 24 PORTLAND CEMENT

Materials : Portland Cement (Type-1)
Source : Island Cement Corporation, Antipolo, Rizal
Proposed Use : Portland Cement Concrete

Test Items		Test Results	Specification AASHTO: M85
Finesse:			
Residue on No. 200, sieve	%	89	
Blain specific surface	m^2/kg	280	
Specific Gravity 3.15			
Normal consistency	%	25.8	
Soundness:			
Autoclave expansion	%	-	0.8 max
Boil Test		Satisfactory	
Time of setting:			
Initial set, minutes		132	60 min
Final set, hours		4.0	10 max
Compressive strength			
1 day	psi	-	
3 days	psi	1,920	1,800 min
7 days	psi	2,880	2,800 min
28 days	psi	4,020	4,000 min
Chemical analysis			
Loss on ignition	%	2.6	3.0 max
Insoluble residue	%	0.59	0.75 max
Sulfur trioxide (SO_3)	%	2.1	3.0 max
Magnesium oxide (MgO)	%	3.5	5.0 max

Remarks: Sample meets Specification Requirements.

TABLE 25 FINE AGGREGATE FOR PCC

Materials : Sand
Source : Porac, Pampanga

Test Items		Test Results	Specification Item 311
Sieve Analysis (% Passing)			
Sieve Size			
9.5 mm	%	100	100
4.75 mm	%	97	95 - 100
2.36 mm	%	80	-
1.18 mm	%	58	45 - 80
0.600 mm	%	35	-
0.300 mm	%	13	5 - 30
0.150 mm	%	4	0 - 10
0.075 mm	%	2	-
Fines Modules		3.13	
Bulk Specific Gravity (SSD)		2.58	
Absorption	%	1.30	
Dry Unit Weight			
Lose	kg/m^3	1,513	
Roded	kg/m^3	1,600	

Remarks: Sample meets Specification Requirements.

TABLE 26 COARSE AGGREGATE FOR PCC

Materials : Blended Crushed Aggregates
Source : Marocco, Antipolo, Rizal

Test Items		Test Results	Specification Item 311
Sieve Analysis (% Passing)			Grading C
Sieve Size			
50.0 mm	%	100	95 - 100
37.5 mm	%	100	-
25.0 mm	%	70	35 - 70
19.0 mm	%	51	-
12.5 mm	%	27	10 - 30
9.5 mm	%	18	-
4.75 mm	%	4	0 - 5
0.075 mm	%	0.3	-
Bulk Specific Gravity (SSD)		2.77	
Absorption	%		
Abrasion Loss	%	26	
Dry Unit Weight		0.4	
Lose	kg/m^3	1,585	
Roded	kg/m^3	1,786	

Remarks: Sample meets Specification Requirements.

TABLE 27 PCC MIXTURES PROPERTIES

A. Mixing Proportion per Bag of Cement

Cement	40.0 kg
Coarse Aggregate	125.7 kg
Fine Aggregate	74.0 kg
Water	18.6 kg

B. Properties of Mixture

1. Cement Factor 9.5 $bags/m^3$
2. Water Cement Ratio 0.64
3. Slump 2.5 - 3 in.
4. Flexural Strength at 28 days

Test No.	Strength (psi)
1	600
2	600
3	624
4	654
5	558
6	558
7	535
8	582
Average	582

Remarks: Sample were taken from manufactured PCC mix. Flexural strength of each test No. were the mean value of 3 specimens, and tested by the third-point loading method.

QUALITY CONTROL TEST RESULTS OF EXPERIMENTAL PAVEMENT CONSTRUCTION

TABLE 1 MODEL NO. 1 GR: SUBBASE COURSE, h = 5 cm

Left Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	90	85	87	87	55 - 85
a Sieve	9.5	mm %	79	71	78	76	40 - 75
	0.425	mm %	-	-	-	-	-
	0.075	mm %	11	8	10	10	0 - 12
Moisture Content		%	12.1	11.0	11.8	11.7	
Field Density		gr/cm³	1.86	1.88	1.90	1.88	
Compaction Degree		%	96	97	98	97	>95

Right Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	82	85	89	85	55 - 85
a Sieve	9.5	mm %	74	74	75	74	40 - 75
	0.425	mm %	-	-	-	-	-
	0.075	mm %	12	11	12	12	0 - 12
Moisture Content		%	12.6	13.2	9.5	11.8	
Field Density		gr/cm³	1.90	1.92	1.96	1.93	
Compaction Degree		%	98	99	101	98	>95

TABLE 2 MODEL NO. 2 SBST: SUBBASE COURSE, h = 8 cm

Left Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	85	82	92	86	55 - 85
a Sieve	9.5	mm %	74	74	81	76	40 - 75
	0.425	mm %	-	-	-	-	-
	0.075	mm %	7	11	11	10	0 - 12
Moisture Content		%	15.3	13.6	12.9	13.9	
Field Density		gr/cm³	1.98	1.92	1.90	1.93	
Compaction Degree		%	102	99	98	100	>95

Right Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	98	94	83	92	55 - 85
a Sieve	9.5	mm %	90	83	71	81	40 - 75
	0.425	mm %	-	-	-	-	-
	0.075	mm %	14	7	8	10	0 - 12
Moisture Content		%	11.4	11.7	14.3	12.5	
Field Density		gr/cm³	1.94	1.98	1.90	1.94	
Compaction Degree		%	100	102	98	100	>95

TABLE 3 MODEL NO. 3 DBST: SUBBASE COURSE, h = 9 cm

Left Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	74	84	86	78	55 - 85
a Sieve	9.5	mm %	74	71	72	72	40 - 75
	0.425	mm %	-	-	-	-	-
	0.075	mm %	10	8	7	10	0 - 12
Moisture Content		%	15.5	14.3	15.0	14.9	
Field Density		gr/cm³	1.98	1.96	2.03	1.99	
Compaction Degree		%	102	101	105	103	>95

Right Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	85	95	91	90	55 - 85
a Sieve	9.5	mm %	73	76	84	78	40 - 75
	0.425	mm %	-	-	-	-	-
	0.075	mm %	9	11	13	11	0 - 12
Moisture Content		%	14.2	14.6	15.1	14.4	
Field Density		gr/cm³	1.86	1.90	2.07	1.94	
Compaction Degree		%	96	98	107	100	>95

TABLE 4 MODEL NO. 4 BMP: SUBBASE COURSE, h = 5 cm

Left Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	88	82	83	84	55 - 85
a Sieve	9.5	mm %	77	73	71	74	40 - 75
	0.425	mm %	-	-	-	-	-
	0.075	mm %	9	11	12	11	0 - 12
Moisture Content		%	16.5	10.2	13.8	13.5	
Field Density		gr/cm³	1.90	1.88	2.02	1.93	
Compaction Degree		%	98	97	104	100	>95

Right Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	85	84	89	86	55 - 85
a Sieve	9.5	mm %	74	72	78	75	40 - 75
	0.425	mm %	-	-	-	-	-
	0.075	mm %	11	8	12	10	0 - 12
Moisture Content		%	14.0	10.0	14.0	12.7	
Field Density		gr/cm³	1.86	1.92	1.92	1.90	
Compaction Degree		%	96	99	99	98	>95

TABLE 5 MODEL NO. 5 GR: SUBBASE COURSE, h = 8 cm

Left Lane 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	91	84	90	88	55 - 85
a Sieve	9.5	mm %	79	72	74	75	40 - 75
	0.425	mm %	19	18	33	23	-
	0.075	mm %	8	6	10	8	0 - 12
Moisture Content		%	13.7	11.0	10.3	11.7	
Field Density		gr/cm³	1.96	1.94	1.94	1.95	
Compaction Degree		%	101	100	100	100	>95

Right Lane 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	98	100	95	98	55 - 85
a Sieve	9.5	mm %	88	90	82	87	40 - 75
	0.425	mm %	23	18	14	18	-
	0.075	mm %	10	7	6	8	0 - 12
Moisture Content		%	12.1	13.5	11.0	12.2	
Field Density		gr/cm³	1.92	1.92	1.96	1.93	
Compaction Degree		%	99	99	101	99	>95

TABLE 6 MODEL NO. 6 SBST: SUBBASE COURSE, h = 12 cm

Left Lane 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	81	93	88	87	55 - 85
a Sieve	9.5	mm %	73	84	77	78	40 - 75
	0.425	mm %	32	23	26	27	-
	0.075	mm %	10	11	11	11	0 - 12
Moisture Content		%	16.1	15.1	16.0	15.7	
Field Density		gr/cm³	1.98	1.97	2.02	1.99	
Compaction Degree		%	102	101	104	102	>95

Right Lane 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	84	85	81	83	55 - 85
a Sieve	9.5	mm %	74	75	75	75	40 - 75
	0.425	mm %	33	19	17	23	-
	0.075	mm %	10	9	6	8	0 - 12
Moisture Content		%	16.0	16.3	16.2	16.2	
Field Density		gr/cm³	1.96	1.92	2.04	1.97	
Compaction Degree		%	101	99	105	102	>95

TABLE 7 MODEL NO. 7 DBST: SUBBASE COURSE, h = 14 cm

Left Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	62	65	80	69	55 - 85
a Sieve	9.5	mm %	55	60	72	62	40 - 75
	0.425	mm %	25	37	11	24	-
	0.075	mm %	5	5	7	6	0 - 12
Moisture Content		%	12.6	11.2	10.3	11.4	
Field Density		gr/cm³	2.03	1.95	1.96	1.98	
Compaction Degree		%	105	101	101	102	>95

Right Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	82	83	92	85	55 - 85
a Sieve	9.5	mm %	73	70	86	76	40 - 75
	0.425	mm %	32	30	38	33	-
	0.075	mm %	8	6	8	7	0 - 12
Moisture Content		%	9.2	12.8	16.2	12.7	
Field Density		gr/cm³	1.92	1.70	1.64	1.75	
Compaction Degree		%	99	87	84	90	>95

TABLE 8 MODEL NO. 8 BMP: SUBBASE COURSE, h = 10 cm

Left Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	77	78	90	82	55 - 85
a Sieve	9.5	mm %	67	68	76	70	40 - 75
	0.425	mm %	30	34	34	33	-
	0.075	mm %	0	13	7	7	0 - 12
Moisture Content		%	11.2	12.1	12.6	12.0	
Field Density		gr/cm³	1.92	2.05	1.95	1.97	
Compaction Degree		%	99	106	101	102	>95

Right Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	93	91	76	87	55 - 85
a Sieve	9.5	mm %	83	81	66	77	40 - 75
	0.425	mm %	38	36	30	35	-
	0.075	mm %	9	8	8	8	0 - 12
Moisture Content		%	12.6	11.6	10.1	11.4	
Field Density		gr/cm³	1.86	1.88	1.94	1.89	
Compaction Degree		%	96	97	100	98	>95

TABLE 9 MODEL NO. 9 DBST: SUBBASE COURSE, h = 30 cm
1st Layer, h = 15 cm

Left Lane 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	91	82	79	83	55 - 85
a Sieve	9.5	mm %	82	74	72	76	40 - 75
	0.425	mm %	42	34	33	36	-
	0.075	mm %	18	11	11	13	0 - 12
Moisture Content		%	11.4	10.1	10.7	10.8	
Field Density		gr/cm³	2.10	2.04	1.93	2.02	
Compaction Degree		%	108	105	100	104	>95

Right Lane 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	94	82	78	85	55 - 85
a Sieve	9.5	mm %	75	74	70	73	40 - 75
	0.425	mm %	36	33	32	34	-
	0.075	mm %	11	9	8	9	0 - 12
Moisture Content		%	16.3	11.9	9.0	12.4	
Field Density		gr/cm³	1.94	2.04	2.14	2.04	
Compaction Degree		%	100	105	110	105	>95

TABLE 10 MODEL NO. 9 DBST: SUBBASE COURSE, h = 30 cm
2nd Layer, h = 15 cm

Left Lane 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	82	78	70	77	55 - 85
a Sieve	9.5	mm %	69	69	62	67	40 - 75
	0.425	mm %	30	29	28	29	-
	0.075	mm %	6	4	5	5	0 - 12
Moisture Content		%	7.0	12.0	12.3	10.4	
Field Density		gr/cm³	2.08	2.00	1.98	2.02	
Compaction Degree		%	107	103	102	104	>95

Right Lane 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	85	69	79	78	55 - 85
a Sieve	9.5	mm %	73	52	72	69	40 - 75
	0.425	mm %	32	26	30	29	-
	0.075	mm %	8	4	4	5	0 - 12
Moisture Content		%	6.5	13.5	9.8	9.9	
Field Density		gr/cm³	2.39	1.96	2.11	2.15	
Compaction Degree		%	123	101	109	111	>95

TABLE 11 MODEL NO. 10 BMP: SUBBASE COURSE, h = 26 cm
1st Layer, h = 15 cm

Left Lane — 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	87	81	78	82	55 - 85
a Sieve	9.5	mm %	79	75	72	75	40 - 75
	0.425	mm %	38	36	33	36	-
	0.075	mm %	12	12	10	11	0 - 12
Moisture Content		%	16.4	13.8	12.9	14.4	
Field Density		gr/cm³	1.81	1.92	1.91	1.88	
Compaction Degree		%	93	99	98	97	>95

Right Lane — 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	77	83	85	82	55 - 85
a Sieve	9.5	mm %	70	76	77	74	40 - 75
	0.425	mm %	33	35	35	34	-
	0.075	mm %	11	10	10	10	0 - 12
Moisture Content		%	12.6	12.5	12.6	12.6	
Field Density		gr/cm³	2.06	1.97	1.87	1.97	
Compaction Degree		%	106	102	96	101	>95

TABLE 12 MODEL NO. 10 BMP: SUBBASE COURSE, h = 26 cm
2nd Layer, h = 11 cm

Left Lane — 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	85	75	87	82	55 - 85
a Sieve	9.5	mm %	71	64	81	72	40 - 75
	0.425	mm %	32	29	36	32	-
	0.075	mm %	8	6	7	7	0 - 12
Moisture Content		%	15.1	16.4	14.4	15.3	
Field Density		gr/cm³	1.82	1.86	1.83	1.84	
Compaction Degree		%	94	96	94	95	>95

Right Lane — 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	75	66	77	73	55 - 85
a Sieve	9.5	mm %	65	62	69	65	40 - 75
	0.425	mm %	28	28	29	28	-
	0.075	mm %	5	5	5	5	0 - 12
Moisture Content		%	12.6	9.1	15.1	12.3	
Field Density		gr/cm³	1.82	1.99	1.82	1.88	
Compaction Degree		%	94	103	94	97	>95

TABLE 13 MODEL NO. 11 AC 4 cm: SUBBASE COURSE, h = 8 cm

Left Lane — 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	80	77	70	76	55 - 85
a Sieve	9.5	mm %	74	73	60	69	40 - 75
	0.425	mm %	35	35	30	33	-
	0.075	mm %	3	3	2	3	0 - 12
Moisture Content		%	13.6	15.1	11.4	13.4	
Field Density		gr/cm³	1.85	2.05	1.91	1.94	
Compaction Degree		%	95	106	98	100	>95

Right Lane — 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	78	55	80	71	55 - 85
a Sieve	9.5	mm %	68	38	71	59	40 - 75
	0.425	mm %	32	35	33	33	-
	0.075	mm %	2	8	2	4	0 - 12
Moisture Content		%	11.7	10.3	16.4	12.8	
Field Density		gr/cm³	1.81	1.92	1.90	1.88	
Compaction Degree		%	93	99	99	97	>95

TABLE 14 MODEL NO. 12 AC 5 cm: SUBBASE COURSE, h = 6 cm

Left Lane — 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	70	76	77	74	55 - 85
a Sieve	9.5	mm %	66	67	68	67	40 - 75
	0.425	mm %	32	32	32	32	-
	0.075	mm %	3	2	2	2	0 - 12
Moisture Content		%	13.8	11.0	8.5	11.1	
Field Density		gr/cm³	2.04	1.90	2.40	2.11	
Compaction Degree		%	105	98	124	109	>95

Right Lane — 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	81	62	85	76	55 - 85
a Sieve	9.5	mm %	72	56	73	67	40 - 75
	0.425	mm %	33	27	33	31	-
	0.075	mm %	2	1	10	4	0 - 12
Moisture Content		%	12.2	14.4	11.1	12.6	
Field Density		gr/cm³	1.86	1.98	2.01	1.95	
Compaction Degree		%	96	102	104	100	>95

TABLE 15 MODEL NO. 13 DBST: SUBBASE COURSE, h = 13 cm

Left Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	79	73	86	79	55 - 85
a Sieve	9.5	mm %	70	64	78	71	40 - 75
	0.425	mm %	-	-	-	-	-
	0.075	mm %	7	9	12	9	0 - 12
Moisture Content		%	13.6	11.8	10.4	11.9	
Field Density		gr/cm³	2.08	2.19	2.13	2.13	
Compaction Degree		%	107	113	110	110	>95

Right Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	88	82	80	83	55 - 85
a Sieve	9.5	mm %	80	72	73	75	40 - 75
	0.425	mm %	-	-	-	-	-
	0.075	mm %	10	10	10	10	0 - 12
Moisture Content		%	12.2	12.4	9.6	11.4	
Field Density		gr/cm³	1.94	2.00	2.10	2.01	
Compaction Degree		%	100	103	108	104	>95

TABLE 16 MODEL NO. 14 BMP: SUBBASE COURSE, h = 16 cm

Left Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	93	84	81	86	55 - 85
a Sieve	9.5	mm %	88	76	73	79	40 - 75
	0.425	mm %	-	-	-	-	-
	0.075	mm %	9	6	7	7	0 - 12
Moisture Content		%	16.5	13.0	14.2	14.6	
Field Density		gr/cm³	1.77	2.02	1.96	1.91	
Compaction Degree		%	91	104	101	99	>95

Right Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	85	83	83	84	55 - 85
a Sieve	9.5	mm %	75	74	74	74	40 - 75
	0.425	mm %	-	-	-	-	-
	0.075	mm %	9	6	7	7	0 - 12
Moisture Content		%	12.8	11.7	11.2	11.7	
Field Density		gr/cm³	1.75	2.11	2.00	1.95	
Compaction Degree		%	90	109	103	101	>95

TABLE 17 MODEL NO. 15 AC 4 cm: SUBBASE COURSE, h = 23 cm
1st Layer, h = 8 cm

Left Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	80	68	79	76	55 - 85
a Sieve	9.5	mm %	67	65	78	70	40 - 75
	0.425	mm %	-	-	-	-	-
	0.075	mm %	8	12	8	9	0 - 12
Moisture Content		%	11.5	14.4	12.8	12.9	
Field Density		gr/cm³	2.00	1.82	1.77	1.86	
Compaction Degree		%	103	94	91	96	>95

Right Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	76	78	85	80	55 - 85
a Sieve	9.5	mm %	71	74	82	75	40 - 75
	0.425	mm %	-	-	-	-	-
	0.075	mm %	8	11	10	10	0 - 12
Moisture Content		%	12.3	15.3	13.1	13.6	
Field Density		gr/cm³	2.02	1.81	1.90	1.91	
Compaction Degree		%	104	98	98	99	>95

TABLE 18 MODEL NO. 15 AC 4 cm: SUBBASE COURSE, h = 23 cm
2nd Layer, h = 15cm

Left Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	92	90	91	91	55 - 85
a Sieve	9.5	mm %	78	77	72	76	40 - 75
	0.425	mm %	37	34	20	30	-
	0.075	mm %	12	8	9	10	0 - 12
Moisture Content		%	4.5	5.8	4.5	4.9	
Field Density		gr/cm³	2.05	2.06	2.13	2.08	
Compaction Degree		%	106	106	110	107	>95

Right Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	85	83	71	86	55 - 85
a Sieve	9.5	mm %	71	69	80	73	40 - 75
	0.425	mm %	33	31	38	34	-
	0.075	mm %	11	9	12	11	0 - 12
Moisture Content		%	5.9	5.8	5.8	5.8	
Field Density		gr/cm³	2.07	2.27	2.17	2.17	
Compaction Degree		%	107	117	112	112	>95

TABLE 19 MODEL NO. 16 AC 5 cm: SUBBASE COURSE, h = 21 cm
1st Layer, h = 6 cm

Left Lane — 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	94	90	87	91	55 - 85
a Sieve	9.5	mm %	75	88	81	81	40 - 75
	0.425	mm %	32	38	36	35	-
	0.075	mm %	5	9	9	8	0 - 12
Moisture Content		%	14.1	14.3	16.5	15.6	
Field Density		gr/cm³	1.77	1.70	1.65	1.71	
Compaction Degree		%	91	88	85	88	>95

Right Lane — 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	87	76	70	78	55 - 85
a Sieve	9.5	mm %	83	68	62	71	40 - 75
	0.425	mm %	36	29	27	31	-
	0.075	mm %	7	5	5	6	0 - 12
Moisture Content		%	13.9	8.8	9.8	10.8	
Field Density		gr/cm³	1.84	1.84	1.73	1.80	
Compaction Degree		%	95	95	89	93	>95

TABLE 20 MODEL NO. 16 AC 5 cm: SUBBASE COURSE, h = 21 cm
2nd Layer, h = 15cm

Left Lane — 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	87	83	80	83	55 - 85
a Sieve	9.5	mm %	72	72	63	69	40 - 75
	0.425	mm %	17	21	16	18	-
	0.075	mm %	6	11	7	8	0 - 12
Moisture Content		%	5.1	4.6	5.7	5.5	
Field Density		gr/cm³	2.15	2.11	2.10	2.12	
Compaction Degree		%	111	109	108	107	>95

Right Lane — 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	50	mm %	100	100	100	100	100
% Passing	25	mm %	87	85	89	87	55 - 85
a Sieve	9.5	mm %	70	58	71	66	40 - 75
	0.425	mm %	15	20	32	22	-
	0.075	mm %	4	6	9	7	0 - 12
Moisture Content		%	5.0	2.8	3.8	3.9	
Field Density		gr/cm³	2.25	2.27	2.20	2.24	
Compaction Degree		%	116	117	113	115	>95

TABLE 21 MODEL NO. 17 AC 5 cm: SUBBASE COURSE, h = 19 cm

Left Lane			1.5 m from Center Line					
Station / Test Items			0 + 025	0 + 075	0 + 125	0 + 175	Average	Spec.
Grading:	50	mm %	100	100	100	100	100	100
% Passing	25	mm %	81	78	89	81	82	55 - 85
a Sieve	9.5	mm %	65	61	62	64	63	40 - 75
	0.425	mm %	22	20	20	24	22	-
	0.075	mm %	11	11	14	12	12	0 - 12
Moisture Content		%	8.8	8.7	8.5	9.0	8.8	
Field Density		gr/cm³	2.000	2.075	2.018	2.059	2.039	
Compaction Degree		%	101	105	102	104	103	>95

Right Lane			1.5 m from Center Line					
Station / Test Items			0 + 025	0 + 075	0 + 125	0 + 175	Average	Spec.
Gading:	50	mm %	100	100	100	100	100	100
% Passing	25	mm %	87	75	88	84	84	55 - 85
a Sieve	9.5	mm %	60	62	72	66	65	40 - 75
	0.425	mm %	20	26	22	23	23	-
	0.075	mm %	13	12	14	12	13	0 - 12
Moisture Content		%	10.2	9.2	9.0	10.3	9.7	
Field Density		gr/cm³	1.927	2.000	2.040	2.074	2.010	
Compaction Degree		%	97	101	103	105	102	>95

TABLE 22 MODEL NO. 18 PPC 18cm: SUBBASE COURSE, h = 20 cm

Left Lane			1.5 m from Center Line					
Station / Test Items			0 + 025	0 + 075	0 + 125	0 +175	Average	Spec.
Grading:	50	mm %	100	100	100	100	100	100
% Passing	25	mm %	81	85	82	80	82	55 - 85
a Sieve	9.5	mm %	60	60	64	61	61	40 - 75
	0.425	mm %	24	22	20	22	22	-
	0.075	mm %	12	15	11	11	12	0 - 12
Moisture Content		%	8.7	8.4	9.3	8.6	8.8	
Field Density		gr/cm³	2.039	2.096	2.020	2.039	2.049	
Compaction Degree		%	103	106	102	103	104	>95

Right Lane			1.5 m from Center Line					
Station / Test Items			0 + 025	0 + 075	0 + 125	0 + 175	Average	Spec.
Grading:	50	mm %	100	100	100	100	100	100
% Passing	25	mm %	80	80	92	81	83	55 - 85
a Sieve	9.5	mm %	59	65	66	59	62	40 - 75
	0.425	mm %	19	22	20	29	23	-
	0.075	mm %	12	11	13	12	12	0 - 12
Moisture Content		%	5.8	10.4	6.8	6.5	9.8	
Field Density		gr/cm³	2.165	2.044	2.190	2.019	2.105	
Compaction Degree		%	109	103	111	102	106	>95

TABLE 23 MODEL NO. 2 SBST : BASE COURSE, h = 15 cm

Left Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	69	79	71	73	60 - 85
a Sieve	4.75	mm %	46	51	44	47	30 - 55
	0.425	mm %	13	22	15	17	8 - 25
	0.075	mm %	6	13	8	9	2 - 14
Moisture Content		%	12.9	10.5	7.1	10.2	
Field Density		gr/cm³	1.92	1.92	1.94	1.93	
Compaction Degree		%	99	99	100	99	>100
Prime Coat		lit/m²	1.11	1.08	1.12	1.10	1.20

Right Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	76	74	53	68	60 - 85
a Sieve	4.75	mm %	53	52	37	47	30 - 55
	0.425	mm %	18	19	12	16	8 - 25
	0.075	mm %	9	10	7	9	2 - 14
Moisture Content		%	10.7	11.6	10.9	11.1	
Field Density		gr/cm³	1.98	2.00	1.96	1.98	
Compaction Degree		%	102	103	101	102	>100
Prime Coat		lit/m²	1.08	1.23	1.11	1.15	1.20

TABLE 24 MODEL NO. 3 DBST : BASE COURSE, h = 15 cm

Left Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	71	74	67	71	60 - 85
a Sieve	4.75	mm %	55	58	49	54	30 - 55
	0.425	mm %	21	21	19	20	8 - 25
	0.075	mm %	10	12	11	11	2 - 14
Moisture Content		%	10.5	12.5	12.5	11.9	
Field Density		gr/cm³	1.94	1.95	1.94	1.94	
Compaction Degree		%	100	101	100	100	>100
Prime Coat		lit/m²	0.92	0.98	0.85	0.92	1.20

Right Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	87	67	93	82	60 - 85
a Sieve	4.75	mm %	66	50	73	63	30 - 55
	0.425	mm %	26	16	31	24	8 - 25
	0.075	mm %	10	9	12	10	2 - 14
Moisture Content		%	11.7	13.1	13.0	12.6	
Field Density		gr/cm³	1.98	2.00	1.94	1.97	
Compaction Degree		%	102	103	100	102	>100
Prime Coat		lit/m²	1.19	1.26	1.16	1.20	1.20

TABLE 25 MODEL NO. 4 BMP : BASE COURSE, h = 15 cm

Left Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	83	65	71	73	60 - 85
a Sieve	4.75	mm %	49	49	51	47	30 - 55
	0.425	mm %	18	17	24	20	8 - 25
	0.075	mm %	9	12	7	9	2 - 14
Moisture Content		%	12.8	14.6	12.4	13.3	
Field Density		gr/cm³	1.96	1.98	1.96	1.97	
Compaction Degree		%	101	102	101	101	>100
Prime Coat		lit/m²	1.24	1.22	1.26	1.24	1.20

Right Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	68	90	73	77	60 - 85
a Sieve	4.75	mm %	53	47	51	50	30 - 55
	0.425	mm %	23	21	19	21	8 - 25
	0.075	mm %	6	19	12	9	2 - 14
Moisture Content		%	13.8	13.4	13.4	12.6	
Field Density		gr/cm³	1.94	2.02	1.96	1.97	
Compaction Degree		%	100	104	101	102	>100
Prime Coat		lit/m²	1.24	0.99	0.88	1.04	1.20

TABLE 26 MODEL NO. 6 SBST: BASE COURSE, h = 15 cm

Left Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	85	84	84	84	60 - 85
a Sieve	4.75	mm %	58	52	52	54	30 - 55
	0.425	mm %	20	20	22	11	8 - 25
	0.075	mm %	11	10	12	11	2 - 14
Moisture Content		%	2.8	3.9	3.5	3.5	
Field Density		gr/cm³	2.29	2.30	2.30	2.30	
Compaction Degree		%	100	101	101	101	>100
Prime Coat		lit/m²	1.15	1.21	1.19	1.18	1.20

Right Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	76	81	83	80	60 - 85
a Sieve	4.75	mm %	51	53	51	52	30 - 55
	0.425	mm %	18	20	20	19	8 - 25
	0.075	mm %	7	12	11	10	2 - 14
Moisture Content		%	3.8	4.1	3.6	3.8	
Field Density		gr/cm³	2.21	2.28	2.25	2.22	
Compaction Degree		%	93	100	99	99	>100
Prime Coat		lit/m²	1.20	1.10	1.25	1.18	1.20

TABLE 27 MODEL NO. 7 DEST : BASE COURSE, h = 15 cm

Left Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	86	76	88	83	60 - 85
a Sieve	4.75	mm %	51	34	59	46	30 - 55
	0.425	mm %	17	8	19	15	8 - 25
	0.075	mm %	17	8	19	15	2 - 14
Moisture Content		%	2.4	3.7	5.4	3.8	
Field Density		gr/cm³	2.28	2.47	2.19	2.51	
Compaction Degree		%	126	108	96	110	>100
Prime Coat		lit/m²	1.29	1.18	1.20	1.22	1.20

Right Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	87	74	80	80	60 - 85
a Sieve	4.75	mm %	51	42	48	47	30 - 55
	0.425	mm %	11	13	16	13	8 - 25
	0.075	mm %	2	7	7	6	2 - 14
Moisture Content		%	2.4	4.2	5.1	3.9	
Field Density		gr/cm³	2.33	2.37	2.23	2.31	
Compaction Degree		%	102	104	98	101	>100
Prime Coat		lit/m²	1.14	1.20	1.27	1.20	1.20

TABLE 28 MODEL NO. 8 BMP : BASE COURSE, h = 15 cm

Left Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	84	84	81	83	60 - 85
a Sieve	4.75	mm %	51	53	46	50	30 - 55
	0.425	mm %	17	22	16	18	8 - 25
	0.075	mm %	8	11	8	8	2 - 14
Moisture Content		%	3.6	4.5	3.8	4.0	
Field Density		gr/cm³	2.43	2.42	2.46	2.44	
Compaction Degree		%	107	106	106	110	>100
Prime Coat		lit/m²	1.14	1.21	1.23	1.19	1.20

Right Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	82	82	84	83	60 - 85
a Sieve	4.75	mm %	47	49	54	50	30 - 55
	0.425	mm %	18	17	23	19	8 - 25
	0.075	mm %	9	9	12	10	2 - 14
Moisture Content		%	4.1	3.6	5.0	4.0	
Field Density		gr/cm³	2.46	2.47	2.43	2.45	
Compaction Degree		%	108	108	107	107	>100
Prime Coat		lit/m²	1.15	1.21	1.26	1.22	1.20

TABLE 29 MODEL NO. 9 DBST : BASE COURSE, h = 15 cm

Left Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	90	91	91	91	60 - 85
a Sieve	4.75	mm %	65	61	68	65	30 - 55
	0.425	mm %	24	21	22	23	8 - 25
	0.075	mm %	11	9	7	9	2 - 14
Moisture Content		%	2.9	5.4	3.2	3.8	
Field Density		gr/cm³	2.08	2.18	2.09	2.12	
Compaction Degree		%	91	96	92	93	>100
Prime Coat		lit/m²	1.18	1.28	1.03	1.16	1.20

Right Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Arading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	93	93	94	93	60 - 85
a Sieve	4.75	mm %	61	63	65	63	30 - 55
	0.425	mm %	21	22	23	22	8 - 25
	0.075	mm %	9	11	10	10	2 - 14
Moisture Content		%	4.1	3.6	5.0	4.0	
Field Density		gr/cm³	2.22	2.26	2.24	2.24	
Compaction Degree		%	97	99	99	98	>100
Prime Coat		lit/m²	1.11	1.18	1.11	1.13	1.20

TABLE 30 MODEL NO.10 BMP BASE COURSE, h = 15 cm

Left Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	90	89	89	89	60 - 85
a Sieve	4.75	mm %	55	61	55	57	30 - 55
	0.425	mm %	19	20	18	19	8 - 25
	0.075	mm %	9	9	8	9	2 - 14
Moisture Content		%	8.0	3.9	3.2	5.1	
Field Density		gr/cm³	2.47	2.39	2.35	2.49	
Compaction Degree		%	108	105	103	105	>100
Prime Coat		lit/m²	1.27	1.19	1.23	1.23	1.20

Right Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	90	95	88	91	60 - 85
a Sieve	4.75	mm %	52	62	55	56	30 - 55
	0.425	mm %	17	21	18	19	8 - 25
	0.075	mm %	7	9	7	8	2 - 14
Moisture Content		%	7.7	3.7	7.2	6.2	
Field Density		gr/cm³	2.28	2.45	2.33	2.35	
Compaction Degree		%	100	108	102	103	>100
Prime Coat		lit/m²	1.27	1.17	1.14	1.19	1.20

TABLE 31 MODEL NO.11 AC 4cm BASE COURSE, h = 12 cm

Left Lane — 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	98	88	88	89	60 - 85
a Sieve	4.75	mm %	61	53	53	56	30 - 55
	0.425	mm %	21	18	19	19	8 - 25
	0.075	mm %	9	8	9	9	2 - 14
Moisture Content		%	4.5	3.6	3.7	3.9	
Field Density		gr/cm³	2.09	2.23	2.24	2.19	
Compaction Degree		%	92	98	98	96	>100
Prime Coat		lit/m²	1.23	1.19	1.23	1.22	1.20

Right Lane — 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	91	89	90	90	60 - 85
a Sieve	4.75	mm %	57	50	59	55	30 - 55
	0.425	mm %	17	16	18	18	8 - 25
	0.075	mm %	11	8	8	9	2 - 14
Moisture Content		%	4.5	4.1	6.3	5.0	
Field Density		gr/cm³	2.13	2.14	2.03	2.10	
Compaction Degree		%	94	94	89	92	>100
Prime Coat		lit/m²	1.15	1.18	1.14	1.16	1.20

TABLE 32 MODEL NO.12 AC 5cm : BASE COURSE, h = 12 cm

Left Lane — 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	91	89	87	89	60 - 85
a Sieve	4.75	mm %	59	54	57	57	30 - 55
	0.425	mm %	20	20	19	20	8 - 25
	0.075	mm %	10	9	10	10	2 - 14
Moisture Content		%	4.5	3.3	4.4	4.1	
Field Density		gr/cm³	2.25	2.28	2.39	2.31	
Compaction Degree		%	99	100	105	105	>100
Prime Coat		lit/m²	1.17	1.19	1.18	1.18	1.20

Right Lane — 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	91	89	97	89	60 - 85
a Sieve	4.75	mm %	59	54	57	57	30 - 55
	0.425	mm %	20	20	19	20	8 - 25
	0.075	mm %	10	9	10	10	2 - 14
Moisture Content		%	4.5	3.3	4.4	4.1	
Field Density		gr/cm³	2.25	2.28	2.39	2.31	
Compaction Degree		%	99	100	105	101	>100
Prime Coat		lit/m²	0.96	1.29	1.34	1.20	1.20

TABLE 33 MODEL NO.13 DBST : BASE COURSE, h = 15 cm

Left Lane — 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	90	86	82	86	60 - 85
a Sieve	4.75	mm %	57	55	51	54	30 - 55
	0.425	mm %	20	20	17	19	8 - 25
	0.075	mm %	7	7	7	8	2 - 14
Moisture Content		%	6.8	6.4	5.1	6.1	
Field Density		gr/cm³	2.28	2.32	2.32	2.31	
Compaction Degree		%	100	102	102	101	>100
Prime Coat		lit/m²	1.13	1.18	1.24	1.18	1.20

Right Lane — 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	97	88	90	88	60 - 85
a Sieve	4.75	mm %	53	53	56	54	30 - 55
	0.425	mm %	17	18	19	18	8 - 25
	0.075	mm %	6	10	10	9	2 - 14
Moisture Content		%	4.4	5.1	5.3	4.9	
Field Density		gr/cm³	2.29	2.40	2.30	2.33	
Compaction Degree		%	100	105	101	102	>100
Prime Coat		lit/m²	1.10	0.87	1.17	1.05	1.20

TABLE 34 MODEL NO.14 BMP : BASE COURSE, h = 15 cm

Left Lane — 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	84	92	84	87	60 - 85
a Sieve	4.75	mm %	48	57	54	53	30 - 55
	0.425	mm %	15	21	19	18	8 - 25
	0.075	mm %	8	11	10	10	2 - 14
Moisture Content		%	3.2	4.2	3.7	3.6	
Field Density		gr/cm³	2.39	2.51	2.56	2.49	
Compaction Degree		%	105	110	112	109	>100
Prime Coat		lit/m²	1.30	1.26	0.95	1.18	1.20

Right Lane — 1.5 m from Center Line

Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	89	91	90	90	60 - 85
a Sieve	4.75	mm %	56	59	58	58	30 - 55
	0.425	mm %	18	20	20	19	8 - 25
	0.075	mm %	8	11	10	10	2 - 14
Moisture Content		%	4.2	3.7	3.6	3.8	
Field Density		gr/cm³	2.23	2.57	2.54	2.48	
Compaction Degree		%	102	113	111	109	>100
Prime Coat		lit/m²	1.24	1.30	1.08	1.21	1.20

TABLE 35 MODEL NO.15 AC 4cm : BASE COURSE, h = 15 cm

Left Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	85	85	84	85	60 - 85
a Sieve	4.75	mm %	51	50	48	50	30 - 55
	0.425	mm %	18	17	17	17	8 - 25
	0.075	mm %	9	8	8	8	2 - 14
Moisture Content		%	4.5	3.8	3.9	4.1	
Field Density		gr/cm³	2.50	2.52	2.39	2.47	
Compaction Degree		%	110	111	105	109	>100
Prime Coat		lit/m²	1.06	1.38	1.19	1.21	1.20

Right Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	85	92	70	82	60 - 85
a Sieve	4.75	mm %	53	56	40	50	30 - 55
	0.425	mm %	18	21	13	17	8 - 25
	0.075	mm %	8	11	5	8	2 - 14
Moisture Content		%	3.8	3.1	3.9	3.6	
Field Density		gr/cm³	2.46	2.33	2.31	2.37	
Compaction Degree		%	108	102	101	104	>100
Prime Coat		lit/m²	1.29	1.33	1.05	1.22	1.20

TABLE 36 MODEL NO.16 AC 5cm : BASE COURSE, h = 15 cm

Left Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	91	90	81	87	60 - 85
a Sieve	4.75	mm %	70	66	58	65	30 - 55
	0.425	mm %	24	24	20	23	8 - 25
	0.075	mm %	8	12	8	9	2 - 14
Moisture Content		%	11.4	8.5	10.3	10.1	
Field Density		gr/cm³	2.30	2.30	2.19	2.24	
Compaction Degree		%	101	101	99	99	>100
Prime Coat		lit/m²	1.31	1.11	0.99	1.14	1.20

Right Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100
% Passing	19	mm %	92	89	83	88	60 - 85
a Sieve	4.75	mm %	55	58	55	56	30 - 55
	0.425	mm %	20	18	20	19	8 - 25
	0.075	mm %	10	9	9	9	2 - 14
Moisture Content		%	4.1	5.6	7.7	5.8	
Field Density		gr/cm³	2.32	2.28	2.17	2.25	
Compaction Degree		%	101	101	96	104	>100
Prime Coat		lit/m²	1.30	1.24	1.22	1.22	1.20

TABLE 37 MODEL NO.17 AC 5cm :BASE COURSE, h = 15 cm

Left Lane — 1.5 m from Center Line

Station / Test Items			0 + 025	0 + 075	0 + 125	0 + 175	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100	100
% Passing	19	mm %	70	73	87	70	75	60 - 85
a Sieve	4.75	mm %	38	37	42	36	38	30 - 55
	0.425	mm %	23	21	27	22	23	8 - 25
	0.075	mm %	13	14	15	13	14	2 - 14
Moisture Content		%	8.7	8.6	8.9	8.4	8.7	
Field Density		gr/cm³	2.308	2.203	2.266	2.203	2.245	
Compaction Degree		%	109	104	107	104	106	>100

Right Lane — 1.5 m from Center Line

Station / Test Items			0 + 025	0 + 075	0 + 125	0 + 175	Average	Spec.
Grading:	37.5	mm %	100	100	100	100	100	100
% Passing	19	mm %	71	74	72	85	76	60 - 85
a Sieve	4.75	mm %	43	40	41	57	45	30 - 55
	0.425	mm %	21	20	23	24	22	8 - 25
	0.075	mm %	12	14	13	14	13	2 - 14
Moisture Content		%	9.3	9.0	9.6	9.5	9.4	
Field Density		gr/cm³	2.331	2.220	2.181	2.287	2.255	
Compaction Degree		%	110	105	103	108	107	>100

TABLE 38 MODEL NO. 1 GR : AGGREGATE SURFACE COURSE, h = 15 cm

Left Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	25	mm %	100	100	100	100	100
% Passing	9.5	mm %	65	64	69	66	50 - 85
a Sieve	4.75	mm %	57	55	57	56	35 - 65
	0.425	mm %	23	25	22	23	15 - 30
	0.075	mm %	14	13	7	11	5 - 20
Moisture Content		%	13.8	13.0	14.8	13.8	
Field Density		gr/cm³	1.92	1.96	1.92	1.93	
Compaction Degree		%	100	102	100	101	>100

Right Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	25	mm %	100	100	100	100	100
% Passing	9.5	mm %	71	70	56	66	50 - 85
a Sieve	4.75	mm %	58	57	47	54	35 - 65
	0.425	mm %	24	21	19	22	15 - 30
	0.075	mm %	11	10	9	10	5 - 20
Moisture Content		%	13.9	13.9	14.9	14.2	
Field Density		gr/cm³	1.98	2.04	1.94	1.99	
Compaction Degree		%	103	106	101	103	>100

TABLE 39 MODEL NO. 5 GR : AGGREGATE SURFACE COURSE, h = 15 cm

Left Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	25	mm %	100	100	100	100	100
% Passing	9.5	mm %	62	62	66	63	50 - 85
a Sieve	4.75	mm %	53	52	52	54	35 - 65
	0.425	mm %	21	21	20	21	15 - 30
	0.075	mm %	13	12	6	10	5 - 20
Moisture Content		%	5.5	4.5	3.8	4.6	
Field Density		gr/cm³	2.53	2.60	2.41	2.51	
Compaction Degree		%	107	110	102	106	>100

Right Lane			1.5 m from Center Line				
Chainage / Test Items			0 + 50	0 + 100	0 + 150	Average	Spec.
Grading:	25	mm %	100	100	100	100	100
% Passing	9.5	mm %	70	59	55	65	50 - 85
a Sieve	4.75	mm %	57	55	45	52	35 - 65
	0.425	mm %	24	19	17	20	15 - 30
	0.075	mm %	11	8	7	9	5 - 20
Moisture Content		%	4.2	4.3	3.8	4.1	
Field Density		gr/cm³	2.62	2.48	2.45	2.52	
Compaction Degree		%	111	105	104	107	>100

TABLE 40 MODEL NO. 2, No. 6: SBST (5 mm) SURFACE COURSE

(Test results are mean value of 6 tests for each model)

Test Items		Design	Model No. 2	Model No. 6
Binder Spraying Rate				
1st Layer	kg/m²	1.4	1.38	1.43
Seal Coat	kg/m²	1.0	1.14	1.16
Binder Total	kg/m²	2.4	2.52	2.59
Aggregate Spreading Rate				
Chip (10~5 mm)	kg/m²	14	14.48	14.09
Seal Coat Sand	kg/m²	8	8.08	6.22
Aggregate Total	kg/m²	22	22.56	20.31

TABLE 41 MODEL NO. 3, No. 7, No. 9, No. 11: DBST (15 mm) SURFACE COURSE

(Test results are mean value of 6 tests for each model)

Test Items		Design	Model No. 3	Model No. 7	Model No. 9	Model No. 13
Binder Spraying Rate						
1st Layer	kg/m²	1.4	1.64	1.48	1.87	1.51
2nd Layer	kg/m²	1.2	1.34	1.24	1.26	1.31
Seal Coat	kg/m²	1.5	1.29	1.41	1.38	1.46
Binder Total	kg/m²	2.4	4.27	4.13	4.51	4.28
Aggregate Spreading Rate						
1st Chip (20-10 mm)	kg/m²	22	22.9	23.5	22.2	24.6
2nd Chip (10- 5 mm)	kg/m²	12	11.8	11.6	10.5	10.6
Seal Coat Sand	kg/m²	6	5.6	5.6	6.7	4.8
Aggregate Total	kg/m²	40	40.3	40.7	39.4	40.4

TABLE 42 MODEL NO. 4, No. 8, No. 10, No. 14: BMP (50 mm) SURFACE COURSE

(Test results are mean value of 6 tests for each model)

Test Items		Design	Model No. 4	Model No. 8	Model No. 10	Model No. 14
Aggregate Spraying Rate						
Base Layer (40-20 mm)	kg/m²	80	81.3	84.4	85.3	82.9
2nd Layer (20-10 mm)	kg/m²	13	13.4	14.8	13.0	15.6
3rd Layer (10- 5 mm)	kg/m²	11	10.1	10.2	11.1	10.9
4th Layer (Sand)	kg/m²	6	8.1	6.0	6.5	5.0
Agregate Total	kg/m²	110	112.9	115.4	115.9	114.4
Binder Spraying Rate						
Base Layer	kg/m²	2.7	2.73	2.76	2.44	2.61
2nd Layer	kg/m²	1.8	1.81	1.77	1.87	1.78
3rd Layer	kg/m²	1.5	1.42	1.48	1.52	1.29
Binder Total	kg/m²	6.0	5.96	6.01	5.83	5.63

TABLE 43 MODEL NO. 11, No. 15: AC 4 cm SURFACE COURSE

(Test results are mean value of 6 tests for each model)
Test Results No. AC-1 h = 4 cm Asphalt Concrete

Test Items			Spec.	Model No. 11	Model No. 15
Mixing Laying Temperature °C			-	156	149
Layer Thickness from Core Sample		cm	-	4.3	4.5
Core Density		gr/m³	-	2.264	2.200
Compaction Degree		%	>97	97.6	95.1
Grading:	19 mm	%	100	100	100
% Passing	4.75 mm	%	45 - 65	61	63
a Sieve	2.36 mm	%	33 - 53	46	46
	0.300 mm	%	10 - 20	12	12
	0.075 mm	%	3 - 8	4	4
Asphalt Content		%	5.7	5.69	5.66

TABLE 44 MODEL NO. 12, No. 16: AC 5 cm SURFACE COURSE

(Test results are mean value of 6 tests for each model)
Test Results No. AC-2 h = 5 cm Asphalt Concrete

Test Items			Spec.	Model No. 11	Model No. 15
Mixing Laying Temperature °C			-	158	153
Layer Thickness from Core Sample		cm	-	5.0	5.5
Core Density		gr/m³	-	2.275	2.263
Compaction Degree		%	>97	98.6	97.7
Grading:	19 mm	%	100	100	100
% Passing	4.75 mm	%	45 - 65	61	62
a Sieve	2.36 mm	%	33 - 53	46	45
	0.300 mm	%	10 - 20	13	12
	0.075 mm	%	3 - 8	4	5
Asphalt Content		%	5.7	5.69	5.67

TABLE 45-1 MODEL NO. 17: AC 5 cm SURFACE COURSE

(Marshall test results are mean value of 3 specimens for each sample)

Test Items			Job-mix Tolerance	Sample No. 1	Sample No. 2	Sample No. 3
Mixing Temperature °C			129 - 149	149	149	149
Marshal Test						
Density		gr/cm^3		2.457	2.451	2.452
Stability		lb	>1,200	2,864	2,560	2,732
Flow		0.01 in	8 - 16	12	10	12
Air Voids		%	3 - 6	5.2	5.3	5.4
Void Filled		%	70 - 80	71	71	71
Asphalt Content *			5.4 - 6.2	5.82	5.90	5.70
Grading:	19	mm %	100	100	100	100
% Passing	4.75	mm %	48 - 62	61	57	61
a Sieve	2.36	mm %	39 - 47	46	44	45
	0.300	mm %	11 - 19	13	14	17
	0.075	mm %	3 - 7	4	5	4

Remarks :

Sample No. 1, 2, 3: Date of Placing: Sept. 25, 1990
Location: L / Lane, Sta. 0 + 264 to 0 + 400

* Percente by Weight of Total Aggregates

Sample meets Job-mix requirements.

TABLE 45-2 MODEL NO. 17: AC 5 cm SURFACE COURSE

(Marshall test results are mean value of 4 specimens for each sample)

Test Items			Job-mix Tolerance	Sample No. 4	Sample No. 5	Sample No. 6
Mixing Temperature °C			129 - 149	149	149	149
Marshal Test						
Density		gr/cm^3		2.451	2.445	2.451
Stability		lb	>1.200	2,797	2,427	2,758
Flow		0.01 in	8 - 16	14	11	11
Air Voids		%	3 - 6	5.4	5.4	5.3
Void Filled		%	70 - 80	71	71	71
Asphalt Content *			5.4 - 6.2	5.87	6.00	5.94
Grading:	19	mm %	100	100	100	100
% Passing	4.75	mm %	48 - 62	61	60	61
a Sieve	2.36	mm %	39 - 47	43	45	42
	0.300	mm %	11 - 19	19	12	19
	0.075	mm %	3 - 7	5	5	6

Remarks :

Sample No. 4, 5: Date of Placing: Oct. 4, 1990
Location: L / Lane, Sta. 0 + 200 to 0 + 264
R / Lane, Sta. 0 + 290 to 0 + 400

Sample No. 6 : Date of Placing: Oct. 5, 1990
Location: R / Lane, Sta. 0 + 200 to 0 + 290

* Percente by Weight of Total Aggregates

Sample meets Job-mix requirements.

TABLE 46-1 MODEL NO. 18: PCC 18 cm FLEXURAL STRENGTH OF PCC

Date of Placement Location	Test No.	Slump	Flexural Strength 28 days, MPa (psi)
Aug. 2, 1990	No. 1	2.5 in	4.75 (690)
Right Lane		3 in	3.89 (564)
Sta. 0 + 000		3 in	3.77 (546)
to		Average	4.14 (600)
Sta. 0 + 094.5			
	No. 2	2.5 in	4.01 (582)
		2.5 in	4.26 (618)
		2.5 in	4.14 (600)
		Average	4.14 (600)
Aug. 15, 1990	No. 3	2.5 in	4.26 (618)
Right Lane		3 in	4.51 (654)
Sta. 0 + 094.5		2.75 in	4.51 (654)
to		Average	4.43 (642)
Sta. 0 + 200			
	No. 4	3 in	4.87 (707)
		3 in	4.26 (618)
		3 in	4.39 (636)
		Average	4.51 (654)

Remarks: Flexural Strength were tested by the third-point loading method.

TABLE 46-2 MODEL NO. 18: PCC 28 cm FLEXURAL STRENGTH OF PCC

Date of Placement Location	Test No.	Slump	Flexural Strength 28 days, MPa (psi)
Sept. 5, 1990	No. 5	3 in	3.77 (546)
Left Lane		3 in	3.89 (564)
Sta. 0 + 000		3 in	3.89 (564)
to		Average	3.85 (585)
Sta. 0 + 150			
	No. 6	3 in	3.89 (564)
		3 in	3.64 (529)
		3 in	4.01 (582)
		Average	3.85 (558)
	No. 7	3 in	3.64 (529)
		3 in	3.64 (529)
		3 in	3.77 (546)
		Average	3.68 (535)
Sept. 6, 1990	No. 8	3 in	3.39 (492)
Left Lane		3 in	3.89 (654)
Sta. 0 + 150		3 in	3.64 (529)
to		Average	3.64 (529)
Sta. 0 + 200			

Remarks: Flexural Strength were tested by the third-point loading method.

TABLE 47 MODEL NO. 17: AC 5 cm SURFACE COURSE

Core Sample Test

Test Items		Spec.	Left Lane		Right Lane	
			0 + 210	0 + 380	0 + 210	0 + 390
Layer Thickness from Core Sample	cm	5.0	6.2	6.2	5.3	4.8
Core Density	gr/cm^3		2.384	2.349	2.463	2.344
Laboratory Density	gr/cm^3		2.466	2.458	2.589	2.452
Compaction Degree	%	>97	97.46	95.56	95.13	95.60

TABLE 48 MODEL NO. 18: PCC 18 cm SURFACE COURSE

Core Sample Test

Test Items		Spec.	Left Lane		Right Lane	
			0 + 010	0 + 190	0 + 010	0 + 190
Layer Thickness from Core Sample	cm	18.0	19.2	18.6	20.6	19.0

Appendix - C

AXLE LOAD EQUIVALENCY FACTORS

Axle load equivalency factors for flexible pavements, single axles and p_t of 2.0.

Axle Load (kips)	Pavement Structural Number (SN)					
	1	2	3	4	5	6
2	.0002	.0002	.0002	.0002	.0002	.0002
4	.002	.003	.002	.002	.002	.002
6	.009	.012	.011	.010	.009	.009
8	.030	.035	.036	.033	.031	.029
10	.075	.085	.090	.085	.079	.076
12	.165	.177	.189	.183	.174	.168
14	.325	.338	.354	.350	.338	.331
16	.589	.598	.613	.612	.603	.596
18	1.00	1.00	1.00	1.00	1.00	1.00
20	1.61	1.59	1.56	1.55	1.57	1.59
22	2.49	2.44	2.35	2.31	2.35	2.41
24	3.71	3.62	3.43	3.33	3.40	3.51
26	5.36	5.21	4.88	4.68	4.77	4.96
28	7.54	7.31	6.78	6.42	6.52	6.83
30	10.4	10.0	9.2	8.6	8.7	9.2
32	14.0	13.5	12.4	11.5	11.5	12.1
34	18.5	17.9	16.3	15.0	14.9	15.6
36	24.2	23.3	21.2	19.3	19.0	19.9
38	31.1	29.9	27.1	24.6	24.0	25.1
40	39.6	38.0	34.3	30.9	30.0	31.2
42	49.7	47.7	43.0	38.6	37.2	38.5
44	61.8	59.3	53.4	47.6	45.7	47.1
46	76.1	73.0	65.6	58.3	55.7	57.0
48	92.9	89.1	80.0	70.9	67.3	68.6
50	113.	108.	97.	86.	81.	82.

Axle load equivalency factors for flexible pavements, tandem axles and p_t of 2.0.

Axle Load (kips)	Pavement Structural Number (SN)					
	1	2	3	4	5	6
2	.0000	.0000	.0000	.0000	.0000	.0000
4	.0003	.0003	.0003	.0002	.0002	.0002
6	.001	.001	.001	.001	.001	.001
8	.003	.003	.003	.003	.003	.002
10	.007	.008	.008	.007	.006	.006
12	.013	.016	.016	.014	.013	.012
14	.024	.029	.029	.026	.024	.023
16	.041	.048	.050	.046	.042	.040
18	.066	.077	.081	.075	.069	.066
20	.103	.117	.124	.117	.109	.105
22	.156	.171	.183	.174	.164	.158
24	.227	.244	.260	.252	.239	.231
26	.322	.340	.360	.353	.338	.329
28	.447	.465	.487	.481	.466	.455
30	.607	.623	.646	.643	.627	.617
32	.810	.823	.843	.842	.829	.819
34	1.06	1.07	1.08	1.08	1.08	1.07
36	1.38	1.38	1.38	1.38	1.38	1.38
38	1.76	1.75	1.73	1.72	1.73	1.74
40	2.22	2.19	2.15	2.13	2.16	2.18
42	2.77	2.73	2.64	2.62	2.66	2.70
44	3.42	3.36	3.23	3.18	3.24	3.31
46	4.20	4.11	3.92	3.83	3.91	4.02
48	5.10	4.98	4.72	4.58	4.68	4.83
50	6.15	5.99	5.64	5.44	5.56	5.77
52	7.37	7.16	6.71	6.43	6.56	6.83
54	8.77	8.51	7.93	7.55	7.69	8.03
56	10.4	10.1	9.3	8.8	9.0	9.4
58	12.2	11.8	10.9	10.3	10.4	10.9
60	14.3	13.8	12.7	11.9	12.0	12.6
62	16.6	16.0	14.7	13.7	13.8	14.5
64	19.3	18.6	17.0	15.8	15.8	16.6
66	22.2	21.4	19.6	18.0	18.0	18.9
68	25.5	24.6	22.4	20.6	20.5	21.5
70	29.2	28.1	25.6	23.4	23.2	24.3
72	33.3	32.0	29.1	26.5	26.2	27.4
74	37.8	36.4	33.0	30.0	29.4	30.8
76	42.8	41.2	37.3	33.8	33.1	34.5
78	48.4	46.5	42.0	38.0	37.0	38.6
80	54.4	52.3	47.2	42.5	41.3	43.0
82	61.1	58.7	52.9	47.6	46.0	47.8
84	68.4	65.7	59.2	53.0	51.2	53.0
86	76.3	73.3	66.0	59.0	56.8	58.6
88	85.0	81.6	73.4	65.5	62.8	64.7
90	94.4	90.6	81.5	72.6	69.4	71.3

Axle load equivalency factors for flexible pavements, single axles and p_t 2.5.

Axle Load (kips)	Pavement Structural Number (SN)					
	1	2	3	4	5	6
2	.0004	.0004	.0003	.0002	.0002	.0002
4	.003	.004	.004	.003	.002	.002
6	.011	.017	.017	.013	.010	.009
8	.032	.047	.051	.041	.034	.031
10	.078	.102	.118	.102	.088	.080
12	.168	.198	.229	.213	.189	.176
14	.328	.358	.399	.388	.360	.342
16	.591	.613	.646	.645	.623	.606
18	1.00	1.00	1.00	1.00	1.00	1.00
20	1.61	1.57	1.49	1.47	1.51	1.55
22	2.48	2.38	2.17	2.09	2.18	2.30
24	3.69	3.49	3.09	2.89	3.03	3.27
26	5.33	4.99	4.31	3.91	4.09	4.48
28	7.49	6.98	5.90	5.21	5.39	5.98
30	10.3	9.5	7.9	6.8	7.0	7.8
32	13.9	12.8	10.5	8.8	8.9	10.0
34	18.4	16.9	13.7	11.3	11.2	12.5
36	24.0	22.0	17.7	14.4	13.9	15.5
38	30.9	28.3	22.6	18.1	17.2	19.0
40	39.3	35.9	28.5	22.5	21.1	23.0
42	49.3	45.0	35.6	27.8	25.6	27.7
44	61.3	55.9	44.0	34.0	31.0	33.1
46	75.5	68.8	54.0	41.4	37.2	39.3
48	92.2	83.9	65.7	50.1	44.5	46.5
50	112.	102.	79.	60.	53.	55.

Axle load equivalency factors for flexible pavements, tandem axles and p_t of 2.5.

Axle Load (kips)	Pavement Structural Number (SN)					
	1	2	3	4	5	6
2	.0001	.0001	.0001	.0000	.0000	.0000
4	.0005	.0005	.0004	.0003	.0003	.0002
6	.002	.002	.002	.001	.001	.001
8	.004	.006	.005	.004	.003	.003
10	.008	.013	.011	.009	.007	.006
12	.015	.024	.023	.018	.014	.013
14	.026	.041	.042	.033	.027	.024
16	.044	.065	.070	.057	.047	.043
18	.070	.097	.109	.092	.077	.070
20	.107	.141	.162	.141	.121	.110
22	.160	.198	.229	.207	.180	.166
24	.231	.273	.315	.292	.260	.242
26	.327	.370	.420	.401	.364	.342
28	.451	.493	.548	.534	.495	.470
30	.611	.648	.703	.695	.658	.633
32	.813	.843	.889	.887	.857	.834
34	1.06	1.08	1.11	1.11	1.09	1.08
36	1.38	1.38	1.38	1.38	1.38	1.38
38	1.75	1.73	1.69	1.68	1.70	1.73
40	2.21	2.16	2.06	2.03	2.08	2.14
42	2.76	2.67	2.49	2.43	2.51	2.61
44	3.41	3.27	2.99	2.88	3.00	3.16
46	4.18	3.98	3.58	3.40	3.55	3.79
48	5.08	4.80	4.25	3.98	4.17	4.49
50	6.12	5.76	5.03	4.64	4.86	5.28
52	7.33	6.87	5.93	5.38	5.63	6.17
54	8.72	8.14	6.95	6.22	6.47	7.15
56	10.3	9.6	8.1	7.2	7.4	8.2
58	12.1	11.3	9.4	8.2	8.4	9.4
60	14.2	13.1	10.9	9.4	9.6	10.7
62	16.5	15.3	12.6	10.7	10.8	12.1
64	19.1	17.6	14.5	12.2	12.2	13.7
66	22.1	20.3	16.6	13.8	13.7	15.4
68	25.3	23.3	18.9	15.6	15.4	17.2
70	29.0	26.6	21.5	17.6	17.2	19.2
72	33.0	30.3	24.4	19.8	19.2	21.3
74	37.5	34.4	27.6	22.2	21.3	23.6
76	42.5	38.9	31.1	24.8	23.7	26.1
78	48.0	43.9	35.0	27.8	26.2	28.8
80	54.0	49.4	39.2	30.9	29.0	31.7
82	60.6	55.4	43.9	34.4	32.0	34.8
84	67.8	61.9	49.0	38.2	35.3	38.1
86	75.7	69.1	54.5	42.3	38.8	41.7
88	84.3	76.9	60.6	46.8	42.6	45.6
90	93.7	85.4	67.1	51.7	46.8	49.7

Axle load equivalency factors for rigid pavements, single axles and p_t of 2.0.

Axle Load (kips)	Slab Thickness, D (inches)								
	6	7	8	9	10	11	12	13	14
2	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
4	.002	.002	.002	.002	.002	.002	.002	.002	.002
6	.011	.010	.010	.010	.010	.010	.010	.010	.010
8	.035	.033	.032	.032	.032	.032	.032	.032	.032
10	.087	.084	.082	.081	.080	.080	.080	.080	.080
12	.186	.180	.176	.175	.174	.174	.173	.173	.173
14	.353	.346	.341	.338	.337	.336	.336	.336	.336
16	.614	.609	.604	.601	.599	.599	.598	.598	.598
18	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
20	1.55	1.56	1.57	1.58	1.58	1.59	1.59	1.59	1.59
22	2.32	2.32	2.35	2.38	2.40	2.41	2.41	2.41	2.42
24	3.37	3.34	3.40	3.47	3.51	3.53	3.54	3.55	3.55
26	4.76	4.69	4.77	4.88	4.97	5.02	5.04	5.06	5.06
28	6.58	6.44	6.52	6.70	6.85	6.94	7.00	7.02	7.04
30	8.92	8.68	8.74	8.98	9.23	9.39	9.48	9.54	9.56
32	11.9	11.5	11.5	11.8	12.2	12.4	12.6	12.7	12.7
34	15.5	15.0	14.9	15.3	15.8	16.2	16.4	16.6	16.7
36	20.1	19.3	19.2	19.5	20.1	20.7	21.1	21.4	21.5
38	25.6	24.5	24.3	24.6	25.4	26.1	26.7	27.1	27.4
40	32.2	30.8	30.4	30.7	31.6	32.6	33.4	34.0	34.4
42	40.1	38.4	37.7	38.0	38.9	40.1	41.3	42.1	42.7
44	49.4	47.3	46.4	46.6	47.6	49.0	50.4	51.6	52.4
46	60.4	57.7	56.6	56.7	57.7	59.3	61.1	62.6	63.7
48	73.2	69.9	68.4	68.4	69.4	71.2	73.3	75.3	76.8
50	88.0	84.1	82.2	82.0	83.0	84.9	87.4	89.8	91.7

Axle load equivalency factors for rigid pavements, tandem axles and p_t of 2.0.

Axle Load (kips)	Slab Thickness, D (inches)								
	6	7	8	9	10	11	12	13	14
2	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
4	.0006	.0005	.0005	.0005	.0005	.0005	.0005	.0005	.0005
6	.002	.002	.002	.002	.002	.002	.002	.002	.002
8	.006	.006	.005	.005	.005	.005	.005	.005	.005
10	.014	.013	.013	.012	.012	.012	.012	.012	.012
12	.028	.026	.026	.025	.025	.025	.025	.025	.025
14	.051	.049	.048	.047	.047	.047	.047	.047	.047
16	.087	.084	.082	.081	.081	.080	.080	.080	.080
18	.141	.136	.133	.132	.131	.131	.131	.131	.131
20	.216	.210	.206	.204	.203	.203	.203	.203	.203
22	.319	.313	.307	.305	.304	.303	.303	.303	.303
24	.454	.449	.444	.441	.440	.439	.439	.439	.439
26	.629	.626	.622	.620	.618	.618	.618	.618	.618
28	.852	.851	.850	.850	.850	.849	.849	.849	.849
30	1.13	1.13	1.14	1.14	1.14	1.14	1.14	1.14	1.14
32	1.48	1.48	1.49	1.50	1.51	1.51	1.51	1.51	1.51
34	1.90	1.90	1.93	1.95	1.96	1.97	1.97	1.97	1.97
36	2.42	2.41	2.45	2.49	2.51	2.52	2.53	2.53	2.53
38	3.04	3.02	3.07	3.13	3.17	3.19	3.20	3.20	3.21
40	3.79	3.74	3.80	3.89	3.95	3.98	4.00	4.01	4.01
42	4.67	4.59	4.66	4.78	4.87	4.93	4.95	4.97	4.97
44	5.72	5.59	5.67	5.82	5.95	6.03	6.07	6.09	6.10
46	6.94	6.76	6.83	7.02	7.20	7.31	7.37	7.41	7.43
48	8.36	8.12	8.17	8.40	8.63	8.79	8.88	8.93	8.96
50	10.00	9.69	9.72	9.98	10.27	10.49	10.62	10.69	10.73
52	11.9	11.5	11.5	11.8	12.1	12.4	12.6	12.7	12.8
54	14.0	13.5	13.5	13.8	14.2	14.6	14.9	15.0	15.1
56	16.5	15.9	15.8	16.1	16.6	17.1	17.4	17.6	17.7
58	19.3	18.5	18.4	18.7	19.3	19.8	20.3	20.5	20.7
60	22.4	21.5	21.3	21.6	22.3	22.9	23.5	23.8	24.0
62	25.9	24.9	24.6	24.9	25.6	26.4	27.0	27.5	27.7
64	29.9	28.6	28.2	28.5	29.3	30.2	31.0	31.6	31.9
66	34.3	32.8	32.3	32.6	33.4	34.4	35.4	36.1	36.5
68	39.2	37.5	36.8	37.1	37.9	39.1	40.2	41.1	41.6
70	44.6	42.7	41.9	42.1	42.9	44.2	45.5	46.6	47.3
72	50.6	48.4	47.5	47.6	48.5	49.9	51.4	52.6	53.5
74	57.3	54.7	53.6	53.6	54.6	56.1	57.7	59.2	60.3
76	64.6	61.7	60.4	60.3	61.2	62.8	64.7	66.4	67.7
78	72.5	69.3	67.8	67.7	68.6	70.2	72.3	74.3	75.8
80	81.3	77.6	75.9	75.7	76.6	78.3	80.6	82.8	84.7
82	90.9	86.7	84.7	84.4	85.3	87.1	89.6	92.1	94.2
84	101.	97.	94.	94.	95.	97.	99.	102.	105.
86	113.	107.	105.	104.	105.	107.	110.	113.	116.
88	125.	119.	116.	116.	116.	118.	121.	125.	128.
90	138.	132.	129.	128.	129.	131.	134.	137.	141.

Axle load equivalency factors for rigid pavements, single axles and p_t of 2.5.

Axle Load (kips)	Slab Thickness, D (inches)								
	6	7	8	9	10	11	12	13	14
2	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002
4	.003	.002	.002	.002	.002	.002	.002	.002	.002
6	.012	.011	.010	.010	.010	.010	.010	.010	.010
8	.039	.035	.033	.032	.032	.032	.032	.032	.032
10	.097	.089	.084	.082	.081	.080	.080	.080	.080
12	.203	.189	.181	.176	.175	.174	.174	.173	.173
14	.376	.360	.347	.341	.338	.337	.336	.336	.336
16	.634	.623	.610	.604	.601	.599	.599	.599	.598
18	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
20	1.51	1.52	1.55	1.57	1.58	1.58	1.59	1.59	1.59
22	2.21	2.20	2.28	2.34	2.38	2.40	2.41	2.41	2.41
24	3.16	3.10	3.22	3.36	3.45	3.50	3.53	3.54	3.55
26	4.41	4.26	4.42	4.67	4.86	4.95	5.01	5.04	5.05
28	6.05	5.76	5.92	6.29	6.61	6.81	6.92	6.98	7.01
30	8.16	7.67	7.79	8.28	8.79	9.14	9.35	9.46	9.52
32	10.8	10.1	10.1	10.7	11.4	12.0	12.3	12.6	12.7
34	14.1	13.0	12.9	13.6	14.6	15.4	16.0	16.4	16.5
36	18.2	16.7	16.4	17.1	18.3	19.5	20.4	21.0	21.3
38	23.1	21.1	20.6	21.3	22.7	24.3	25.6	26.4	27.0
40	29.1	26.5	25.7	26.3	27.9	29.9	31.6	32.9	33.7
42	36.2	32.9	31.7	32.2	34.0	36.3	38.7	40.4	41.6
44	44.6	40.4	38.8	39.2	41.0	43.8	46.7	49.1	50.8
46	54.5	49.3	47.1	47.3	49.2	52.3	55.9	59.0	61.4
48	66.1	59.7	56.9	56.8	58.7	62.1	66.3	70.3	73.4
50	79.4	71.7	68.2	67.8	69.6	73.3	78.1	83.0	87.1

Axle load equivalency factors for rigid pavements, tandem axles and p_t of 2.5.

Axle Load (kips)	Slab Thickness, D (inches)								
	6	7	8	9	10	11	12	13	14
2	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001	.0001
4	.0006	.0006	.0005	.0005	.0005	.0005	.0005	.0005	.0005
6	.002	.002	.002	.002	.002	.002	.002	.002	.002
8	.007	.006	.006	.005	.005	.005	.005	.005	.005
10	.015	.014	.013	.013	.012	.012	.012	.012	.012
12	.031	.028	.026	.026	.025	.025	.025	.025	.025
14	.057	.052	.049	.048	.047	.047	.047	.047	.047
16	.097	.089	.084	.082	.081	.081	.080	.080	.080
18	.155	.143	.136	.133	.132	.131	.131	.131	.131
20	.234	.220	.211	.206	.204	.203	.203	.203	.203
22	.340	.325	.313	.308	.305	.304	.303	.303	.303
24	.475	.462	.450	.444	.441	.440	.439	.439	.439
26	.644	.637	.627	.622	.620	.619	.618	.618	.618
28	.855	.854	.852	.850	.850	.850	.849	.849	.849
30	1.11	1.12	1.13	1.14	1.14	1.14	1.14	1.14	1.14
32	1.43	1.44	1.47	1.49	1.50	1.51	1.51	1.51	1.51
34	1.82	1.82	1.87	1.92	1.95	1.96	1.97	1.97	1.97
36	2.29	2.27	2.35	2.43	2.48	2.51	2.52	2.52	2.53
38	2.85	2.80	2.91	3.03	3.12	3.16	3.18	3.20	3.20
40	3.52	3.42	3.55	3.74	3.87	3.94	3.98	4.00	4.01
42	4.32	4.16	4.30	4.55	4.74	4.86	4.91	4.95	4.96
44	5.26	5.01	5.16	5.48	5.75	5.92	6.01	6.06	6.09
46	6.36	6.01	6.14	6.53	6.90	7.14	7.28	7.36	7.40
48	7.64	7.16	7.27	7.73	8.21	8.55	8.75	8.86	8.92
50	9.11	8.50	8.55	9.07	9.68	10.14	10.42	10.58	10.66
52	10.8	10.0	10.0	10.6	11.3	11.9	12.3	12.5	12.7
54	12.8	11.8	11.7	12.3	13.2	13.9	14.5	14.8	14.9
56	15.0	13.8	13.6	14.2	15.2	16.2	16.8	17.3	17.5
58	17.5	16.0	15.7	16.3	17.5	18.6	19.5	20.1	20.4
60	20.3	18.5	18.1	18.7	20.0	21.4	22.5	23.2	23.6
62	23.5	21.4	20.8	21.4	22.8	24.4	25.7	26.7	27.3
64	27.0	24.6	23.8	24.4	25.8	27.7	29.3	30.5	31.3
66	31.0	28.1	27.1	27.6	29.2	31.3	33.2	34.7	35.7
68	35.4	32.1	30.9	31.3	32.9	35.2	37.5	39.3	40.5
70	40.3	36.5	35.0	35.3	37.0	39.5	42.1	44.3	45.9
72	45.7	41.4	39.6	39.8	41.5	44.2	47.2	49.8	51.7
74	51.7	46.7	44.6	44.7	46.4	49.3	52.7	55.7	58.0
76	58.3	52.6	50.2	50.1	51.8	54.9	58.6	62.1	64.8
78	65.5	59.1	56.3	56.1	57.7	60.9	65.0	69.0	72.3
80	73.4	66.2	62.9	62.5	64.2	67.5	71.9	76.4	80.2
82	82.0	73.9	70.2	69.6	71.2	74.7	79.4	84.4	88.8
84	91.4	82.4	78.1	77.3	78.9	82.4	87.4	93.0	98.1
86	102.	92.	87.	86.	87.	91.	96.	102.	108.
88	113.	102.	96.	95.	96.	100.	105.	112.	119.
90	125.	112.	106.	105.	106.	110.	115.	123.	130.